

(FILE 'HOME' ENTERED AT 12:41:05 ON 26 NOV 2005)

FILE 'CAPLUS' ENTERED AT 12:41:23 ON 26 NOV 2005

L1 STRUCTURE UPLOADED
S L1

FILE 'REGISTRY' ENTERED AT 12:41:46 ON 26 NOV 2005

L2 50 S L1

FILE 'CAPLUS' ENTERED AT 12:41:46 ON 26 NOV 2005

L3 46 S L2
S L1

FILE 'REGISTRY' ENTERED AT 12:41:54 ON 26 NOV 2005

L4 5357 S L1 FULL

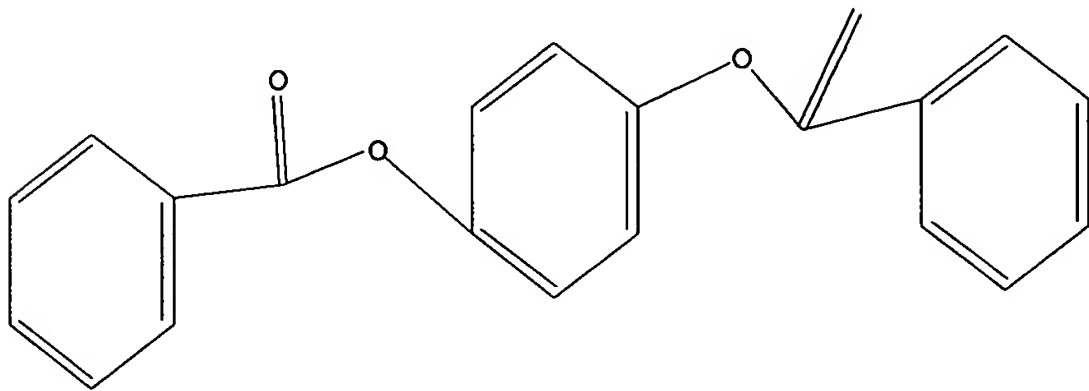
FILE 'CAPLUS' ENTERED AT 12:41:55 ON 26 NOV 2005

L5 2319 S L4 FULL
L6 67 S L5 AND (HYDROXYL OR AMINO OR SULFHYDRYL)
L7 1324 S L5 AND POLYMER?
L8 118 S L5 AND SPACER
L9 1377 S L6 OR L7 OR L8
L10 879 S L9 AND PY<2001
L11 57 S L10 AND MESOGEN

=> d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=>

L11 ANSWER 1 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2001:183879 CAPLUS
 DOCUMENT NUMBER: 134:359458
 TITLE: Ordered **polymer** microstructures synthesized from dispersions of liquid crystal mesogens
 AUTHOR(S): Cairns, Darran R.; Eichenlaub, Nancy S.; Crawford, Gregory P.
 CORPORATE SOURCE: Division of Engineering, Brown University, Providence, RI, 02912, USA
 SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2000), 352, 275-282
 CODEN: MCLCE9; ISSN: 1058-725X
 PUBLISHER: Gordon & Breach Science Publishers
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The authors manufactured highly ordered **polymer** spheres, rods and fibrils from reactive mesogens using a template synthesis approach. The structures were fabricated by photopolymerization of reactive mesogens in confining templates (spherical and cylindrical) while in the nematic phase. The spheres were produced from suspensions of a **mesogen** in glycerol and the rods and fibrils by a confining template method. The dielectric and optical anisotropy of the liquid crystalline monomer is captured by photopolymerization. The balls were electro-mechano-optical (EIMO) in nature undergoing a mechanical reorientation in the presence of an applied electric field, and therefore may be useful for electrooptic applications. The fibrils possess unusual properties due to their anisotropy and can be used to produce mesoscopic structures by self assembly. The authors present a number of these novel structures and methods for their fabrication.

IT 199930-19-3P, RM257 homopolymer
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
 (ordered **polymer** microstructures synthesized by photopolymerization of reactive liquid crystal mesogens dispersions)

RN 199930-19-3 CAPLUS

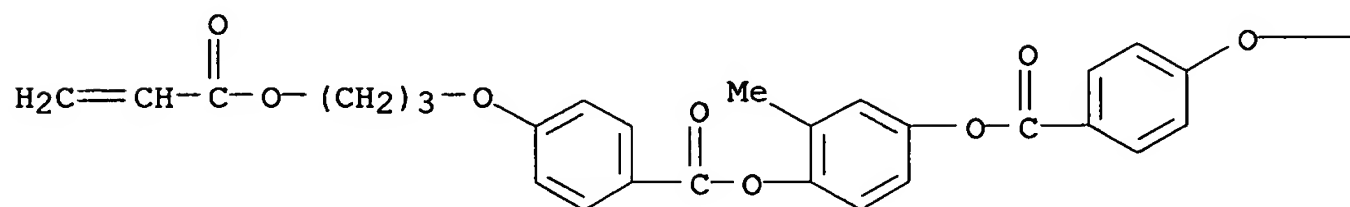
CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

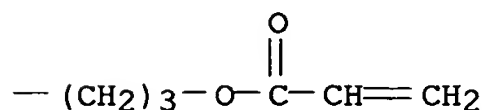
CRN 174063-87-7

CMF C33 H32 O10

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

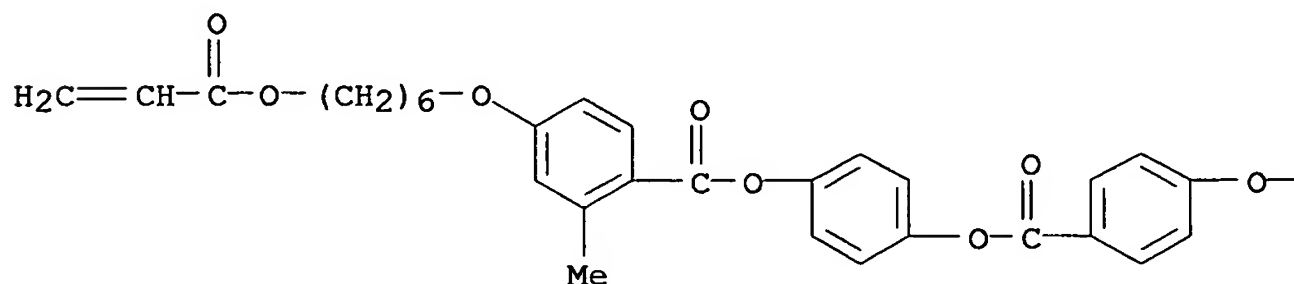
ACCESSION NUMBER: 2000:898389 CAPLUS
 DOCUMENT NUMBER: 134:178846
 TITLE: **Polymerizable** liquid crystalline twin molecules: synthesis and thermotropic properties
 AUTHOR(S): Kurschner, Kathrin; Strohmriegl, Peter
 CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuther Institut fur Makromolekulforschung (BIMF), Universitat Bayreuth, Bayreuth, 95440, Germany
 SOURCE: Liquid Crystals (2000), 27(12), 1595-1611
 CODEN: LICRE6; ISSN: 0267-8292
 PUBLISHER: Taylor & Francis Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The synthesis of 14 novel low molar mass liquid crystalline twin mols. is described and exptl. details are given. The twin monomers contain two mesogenic units which are connected by a flexible **spacer**. Two terminal acrylate groups make these twins suitable for photopolymn. The insertion of lateral groups into the **mesogen** leads to glass-forming properties. We tested several substituents (-OCH₃, -CH₃) in different positions of the mesogenic unit and investigated their thermotropic properties as well as their crystallization behavior by polarizing microscopy and DSC expts. Some of the novel twin mols. with lateral substituents in the mesogenic core have unusually broad mesophases of about 150°C. Below T_g stable LC glasses are formed. At room temperature a slow, kinetically hindered crystallization starts after about three hours. The broad mesophases of the twin mols. allow investigations of the photopolymn. kinetics over a wide temperature range. The addition of chiral non-liquid crystalline comonomers and subsequent photopolymn. leads to cholesteric networks with interesting optical properties. Last but not least, the twins are suitable mixing agents which suppress the crystallization of classical mono-rods.

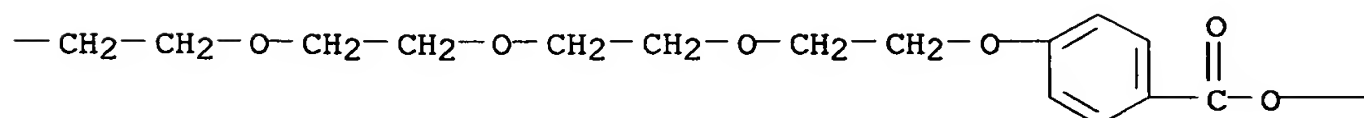
IT 250230-56-9P 250230-57-0P 250230-58-1P
 325976-68-9P 325976-69-0P 325976-72-5P
 325976-73-6P 325976-74-7P 325976-76-9P
 325976-79-2P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis and thermotropic properties of **polymerizable** liquid crystalline twin mols.)

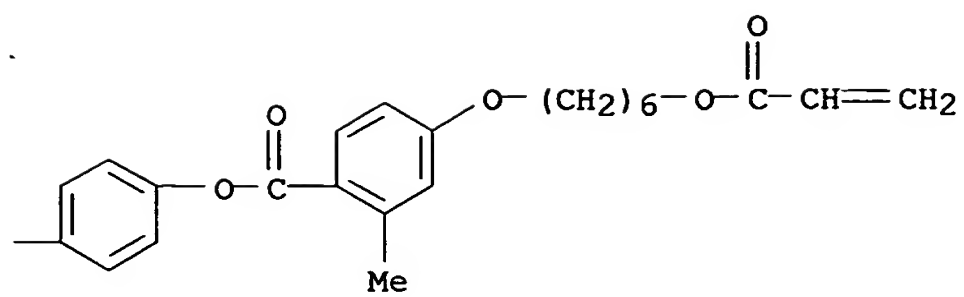
RN 250230-56-9 CAPLUS
 CN Benzoic acid, 4,4'-[oxybis(2,1-ethanediylloxy-2,1-ethanediylloxy)]bis-, bis[4-[[2-methyl-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



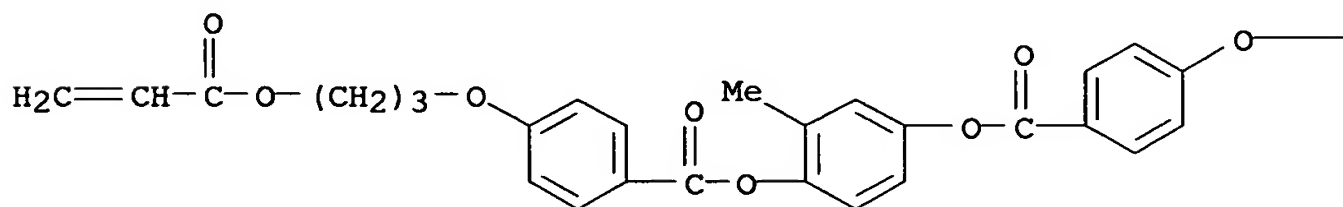
PAGE 1-B



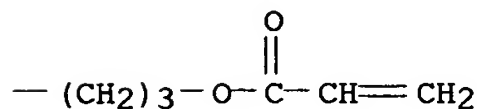


L11 ANSWER 3 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:847355 CAPLUS
 DOCUMENT NUMBER: 134:163520
 TITLE: Yarn ball **polymer** microstructures: A structural transition phenomenon induced by an electric field
 AUTHOR(S): Kossyrev, Pavel A.; Crawford, Gregory P.
 CORPORATE SOURCE: Division of Engineering, Brown University, Providence, RI, 02912, USA
 SOURCE: Applied Physics Letters (2000), 77(23), 3752-3754
 CODEN: APPLAB; ISSN: 0003-6951
 PUBLISHER: American Institute of Physics
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB An unusual **polymer** yarn ball microstructure is reported that is created through a template-based synthetic process involving reactive mesogens. Exptl. results are presented of a unique structural transition of the yarn ball when subjected to an elec. field, and this transition is described with a modified elastic theory. The interactions of the mesogenic thread segments that comprise the yarn ball are modeled in terms of mean-field theory by introducing an intersegment potential.
 IT 199930-19-3P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (yarn ball **polymer** microstructure and structural transition phenomenon induced by elec. field)
 RN 199930-19-3 CAPLUS
 CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 174063-87-7
 CMF C33 H32 O10

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:707867 CAPLUS
 DOCUMENT NUMBER: 133:363203
 TITLE: Characterization of **mesogen**-jacketed liquid crystalline **polymers** by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry

AUTHOR(S): He, Meiyu; He, Jiangtao; Mi, Qiding; Zhou, Qifeng
CORPORATE SOURCE: Department of Chemistry, Peking University, Beijing,
100871, Peop. Rep. China
SOURCE: Rapid Communications in Mass Spectrometry (
2000), 14(19), 1806-1812
CODEN: RCMSEF; ISSN: 0951-4198
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB For synthetic **polymers**, a proper sample preparation method is essential for successful characterization by matrix-assisted laser desorption/ionization time-of-flight (MALDI-TOF) mass spectrometry. In this work, six synthetic **mesogen**-jacketed liquid crystalline vinyl and (meth)acrylate **polymers** with different main-chain, **spacer**, and mesogenic units were investigated by MALDI-TOF mass spectrometry. Several factors that affect the anal. of these **polymers** were examined. These factors include matrixes used, cationization salts used, the concentration of **polymers**, and the ratio of sample to matrix. After testing different conditions, we found a suitable sample preparation method for these six **polymers**. The number-average mol. weight, weight-average mol. weight, and polydispersity were calculated using data obtained in the linear mode. The end groups of the **polymers** were proposed using data obtained in the reflectron mode.

IT 105280-90-8
RL: PRP (Properties)
(characterization of liquid-crystalline **polymers** by MALDI-TOF mass spectrometry)

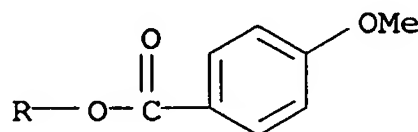
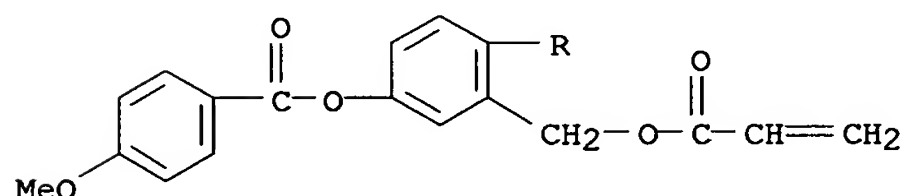
RN 105280-90-8 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 105252-92-4

CMF C26 H22 O8



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:576287 CAPLUS

DOCUMENT NUMBER: 133:238686

TITLE: Synthesis and characterization of new liquid crystalline epoxy resin containing ester **mesogen**

AUTHOR(S): Liu, Wei-Chang; Wang, Xiao-Gong; Zhou, Qi-Xiang; Liu, De-Shan

CORPORATE SOURCE: Department of Chemical Engineering and School of Materials Science and Engineering, Tsinghua University, Beijing, 100084, Peop. Rep. China

SOURCE: Gaodeng Xuexiao Huaxue Xuebao (2000), 21(7),

PUBLISHER: Gaodeng Jiaoyu Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB Ester **mesogen**-containing epoxy resin was prepared by treating hydroquinone bis(4-hydroxybenzoate) with epichlorohydrin and characterized by IR, ¹H NMR, DSC, and polarized optical microscopy. The number-average mol. weight was measured by end-group anal. The effect of the mol. weight and mol. weight distribution of the prepolymer on liquid crystal properties of the products was discussed.

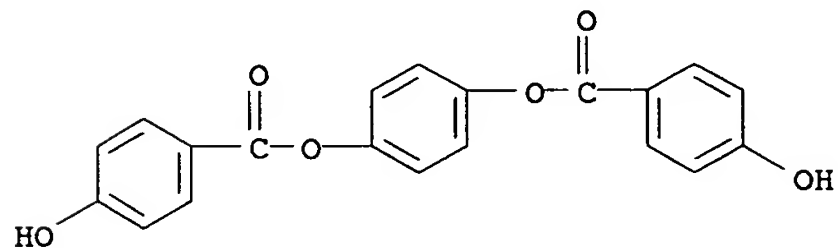
IT **292624-97-6P**, Epichlorohydrin-hydroquinone bis(4-hydroxybenzoate) copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and liquid crystal properties of hydroquinone bis(4-hydroxybenzoate) copolymer)

RN 292624-97-6 CAPLUS

CN Benzoic acid, 4-hydroxy-, 1,4-phenylene ester, polymer with (chloromethyl)oxirane (9CI) (CA INDEX NAME)

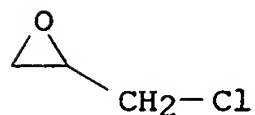
CM 1

CRN 53201-62-0
CMF C20 H14 O6



CM 2

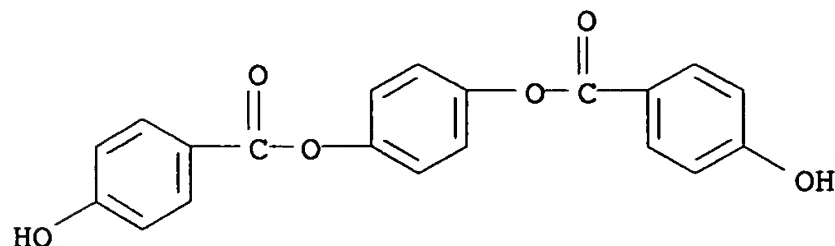
CRN 106-89-8
CMF C3 H5 Cl O



IT **53201-62-0P**, Hydroquinone bis(4-hydroxybenzoate)
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and polymerization with epichlorohydrin)

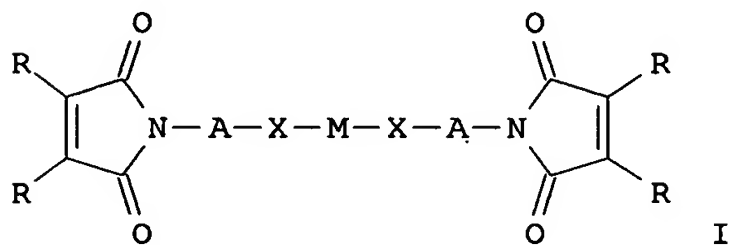
RN 53201-62-0 CAPLUS

CN Benzoic acid, 4-hydroxy-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



DOCUMENT NUMBER: 133:89922
 TITLE: Bismaleimides comprising mesogenic groups and oligomeric liquid crystalline bismaleimides
 INVENTOR(S): Imai, Masaru; Frings, Rainer B.; Grahe, Gerwald F.; Kawamura, Joji; Obi, Naoki
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan
 SOURCE: Eur. Pat. Appl., 27 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1016659	A1	20000705	EP 1999-125923	19991223 <--
EP 1016659	B1	20030924		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000191640	A2	20000711	JP 1999-364345	19991222 <--
US 6169186	B1	20010102	US 1999-472013	19991227
PRIORITY APPLN. INFO.:			EP 1998-124805	A 19981229
OTHER SOURCE(S):	MARPAT 133:89922			
GI				



AB The invention relates to bismaleimides comprising mesogenic groups which consist, corresponding to I, of two reactive terminal maleimide groups which are linked via linear or singly alkyl-substituted alkylene chains A, which are linked to an aromatic **mesogen** M via ester, amide or ether groups, wherein A independently represents an alkylene chain comprising 3 to 20 CH₂ groups, wherein one C atom of each alkylene chain A can be chiral due to alkyl substitution, X independently represents C(O)O, C(O)NH or O, and M represents a **mesogen** consisting of at least two rings including an aromatic or a heterocyclic ring, which are linked para to each other by single bond, CH₂CH₂, CH=CH, CC, ester, amide, methylstilbene, azomethine, azine, azo or azoxy groups, and which can be mono- or di-substituted by alkyl groups, wherein the terminal aromatic rings are each substituted in the para position to these linking groups by an O or NH group of X, and R independently represents an H atom, an alkyl group comprising 1 to 8 C atoms, a Ph ring or a halogen atom. The invention also relates to methods of producing the bismaleimides.

IT 280136-47-2P 280136-48-3P 280136-49-4P
 280136-51-8P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (bismaleimides comprising mesogenic groups and oligomeric liquid crystalline bismaleimides)

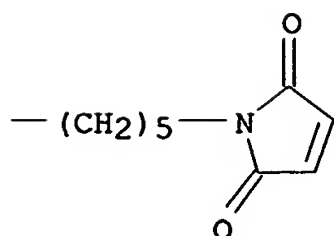
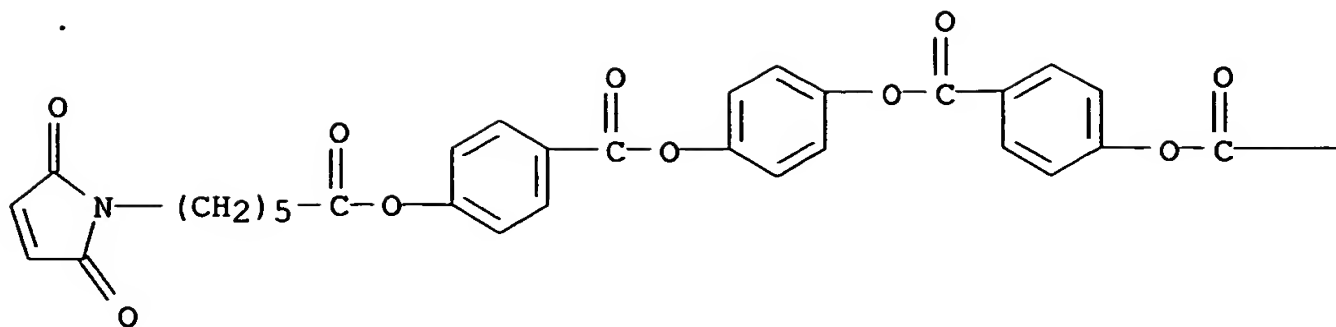
RN 280136-47-2 CAPLUS

CN 1H-Pyrrole-1-hexanoic acid, 2,5-dihydro-2,5-dioxo-, 1,4-phenylenebis(oxy-carbonyl-4,1-phenylene) ester, polymer with piperazine (9CI) (CA INDEX NAME)

CM 1

CRN 280136-38-1

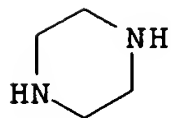
CMF C40 H36 N2 O12



CM 2

CRN 110-85-0

CMF C4 H10 N2



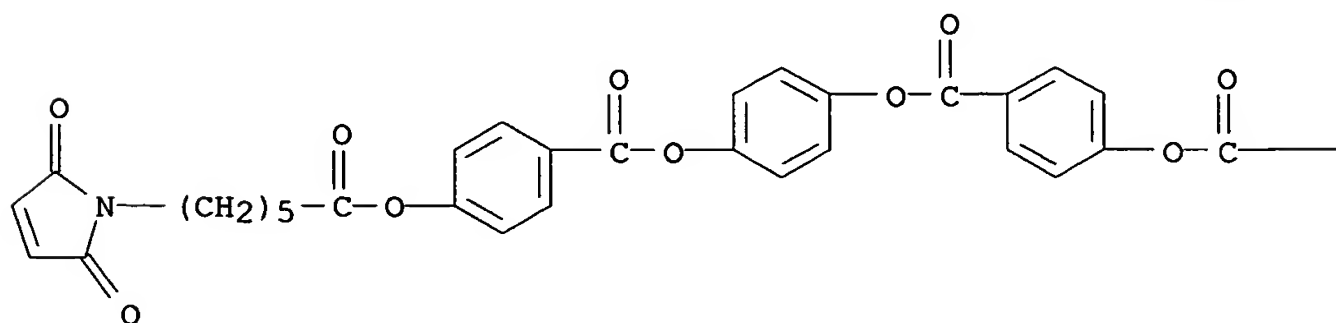
RN 280136-48-3 CAPLUS

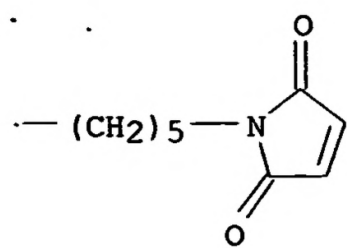
CN 1H-Pyrrole-1-hexanoic acid, 2,5-dihydro-2,5-dioxo-, 1,4-phenylenebis(oxycarbonyl-4,1-phenylene) ester, polymer with 1,4-benzenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 280136-38-1

CMF C40 H36 N2 O12



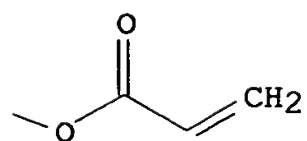
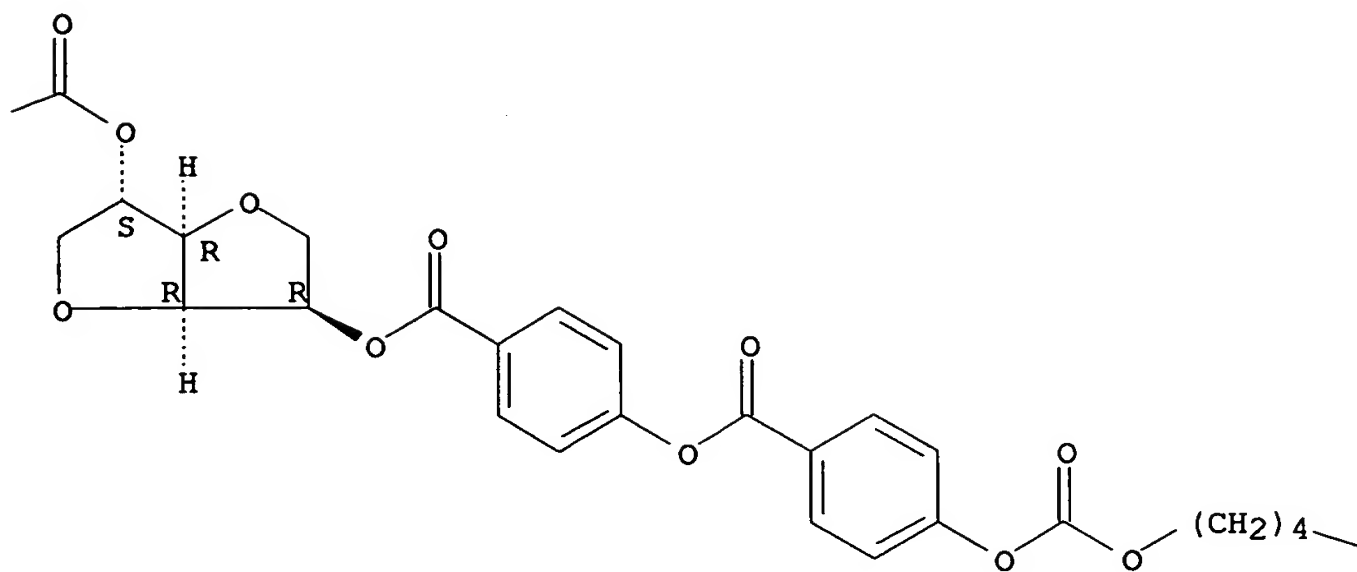
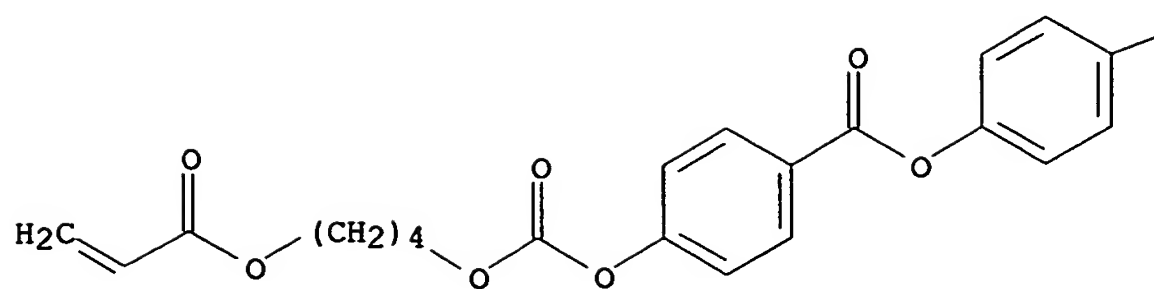


ACCESSION NUMBER: 2000:441890 CAPLUS
 DOCUMENT NUMBER: 133:81645
 TITLE: Utilization of **polymerizable** liquid crystal substances for the production of optical components
 INVENTOR(S): Meyer, Frank; Schneider, Norbert; Schuhmacher, Peter
 PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
 SOURCE: PCT Int. Appl., 39 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000037585	A1	20000629	WO 1999-EP10294	19991222 <--
W: CH, DE, GB, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19859584	A1	20000629	DE 1998-19859584	19981222 <--
EP 1144547	A1	20011017	EP 1999-968369	19991222
EP 1144547	B1	20030903		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002533742	T2	20021008	JP 2000-589644	19991222
US 2003219548	A1	20031127	US 2003-430322	20030507
US 6773766	B2	20040810		
PRIORITY APPLN. INFO.:			DE 1998-19859584	A 19981222
			WO 1999-EP10294	W 19991222
			US 2001-857216	B1 20010622

OTHER SOURCE(S): MARPAT 133:81645
 AB The invention relates to the utilization of **polymerizable** liquid crystal compds., Z1Y1A1Y3MY4A2Y2Z2 (Z1, Z2 = **polymerizable** group; Y1-4 = single bond, O, S, OCO, etc.; A1, A2 = C2-30-spacer; M = **mesogen**), for the production of optical elements having color and polarization-selective reflection and to optical elements containing said compds. in monomeric or polymerized form.
 IT **252010-00-7P**
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (utilization of **polymerizable** liquid crystal substances for the production of optical components)
 RN 252010-00-7 CAPLUS
 CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)
 CM 1
 CRN 223572-88-1
 CMF C50 H46 O20

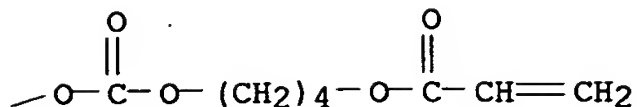
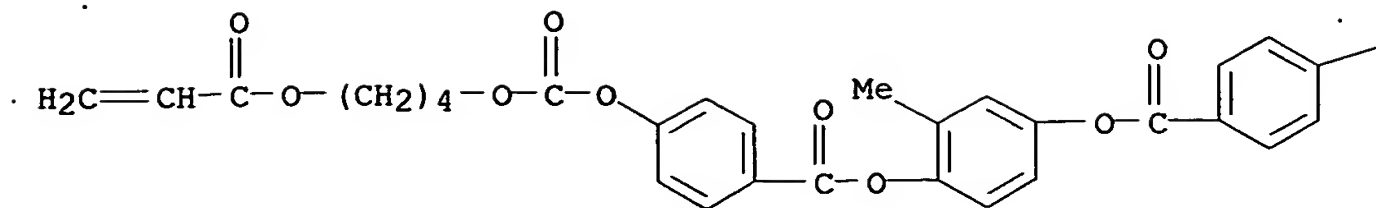
Absolute stereochemistry.



CM 2

CRN 187585-64-4

CMF C37 H36 O14



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:273781 CAPLUS

DOCUMENT NUMBER: 133:17928

TITLE: Synthesis and characterization of smectic C(Sc) phase liquid crystal **polymers** with **mesogen** laterally fixed onto the main chain. (II)

AUTHOR(S): Zhang, Shu-yuan; Ning, Chao-feng; Zheng, Shijun; Ma, Zhi; Li, Zifa; Zhou, Qi-feng

CORPORATE SOURCE: Institute of Chemistry and Chemical Engineering, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Gaofenzi Cailiao Kexue Yu Gongcheng (2000), 16(2), 18-22

CODEN: GCKGEI; ISSN: 1000-7555

PUBLISHER: Gaofenzi Cailiao Kexue Yu Gongcheng Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A New series of smectic C phase liquid crystal **polymers** with mesogenic laterally fixed onto the main chain was synthesized via low temperature solution condensation polymerization from 2,5-bis(p-isoalkoxybenzoxo)hydroquinone and aliphatic chloride with different structure. The low mol. weight compds. were analyzed by elementary anal., IR, 1H-NMR and MS. The **polymers** were characterized by GPC, DSC, TG, WAXD (wide-angle x-ray diffraction) and polarizing microscope with heating stage. All the **polymers** go to liquid crystal phase when heated to their melting temperature (Tm). The broken focal-conic texture can be observed. Temperature-variable X-ray diffraction realized that they are smectic C phase. Both Tm and Ti (clearing temperature of liquid crystal phase) of all the **polymers** decrease with the increase of the end alkoxy group length and the flexible **spacer** unit in the **polymers** gets longer, the liquid crystal temperature range of the **polymers** becomes narrow.

IT 195156-72-0P 195156-74-2P 195156-76-4P

272790-30-4P 272790-31-5P 272790-32-6P

272790-33-7P 272790-34-8P 272790-35-9P

272790-36-0P 272790-37-1P 272790-38-2P

272790-39-3P 272790-40-6P 272790-41-7P

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272790-45-1P 272790-46-2P

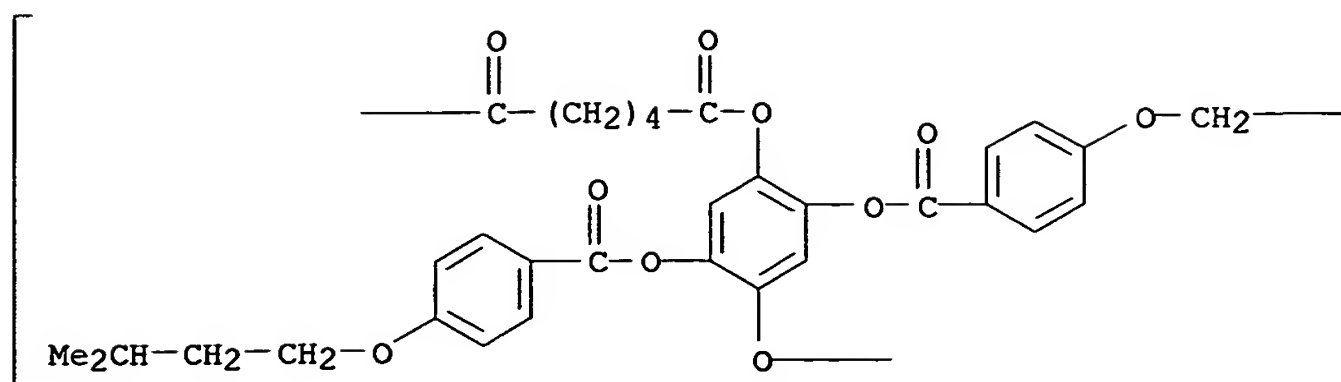
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(liquid crystalline; synthesis and characterization of smectic C(Sc) phase liquid crystal **polymers** with **mesogen** laterally fixed onto main chain)

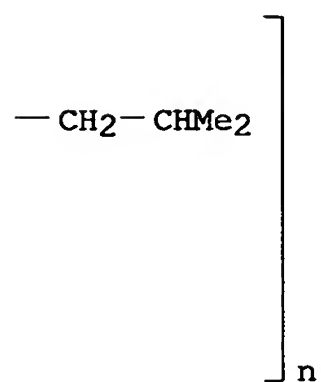
RN 195156-72-0 CAPLUS

CN Poly[oxy[2,5-bis[[4-(3-methylbutoxy)benzoyl]oxy]-1,4-phenylene]oxy(1,6-

PAGE 1-A

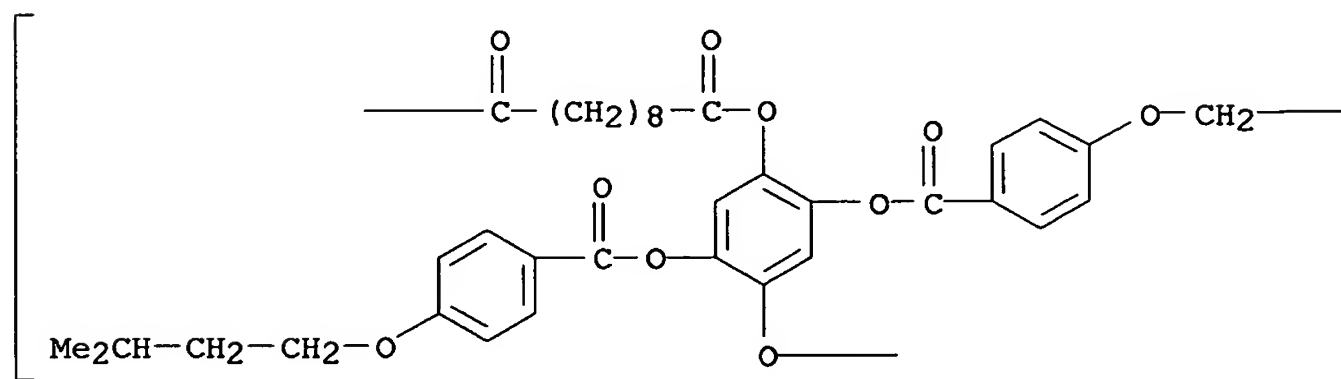


PAGE 1-B

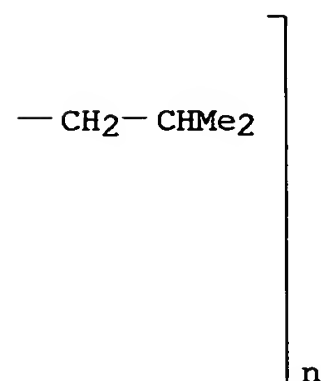


RN 195156-74-2 CAPLUS
CN Poly[oxy[2,5-bis[[4-(3-methylbutoxy)benzoyl]oxy]-1,4-phenylene]oxy(1,10-dioxo-1,10-decanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



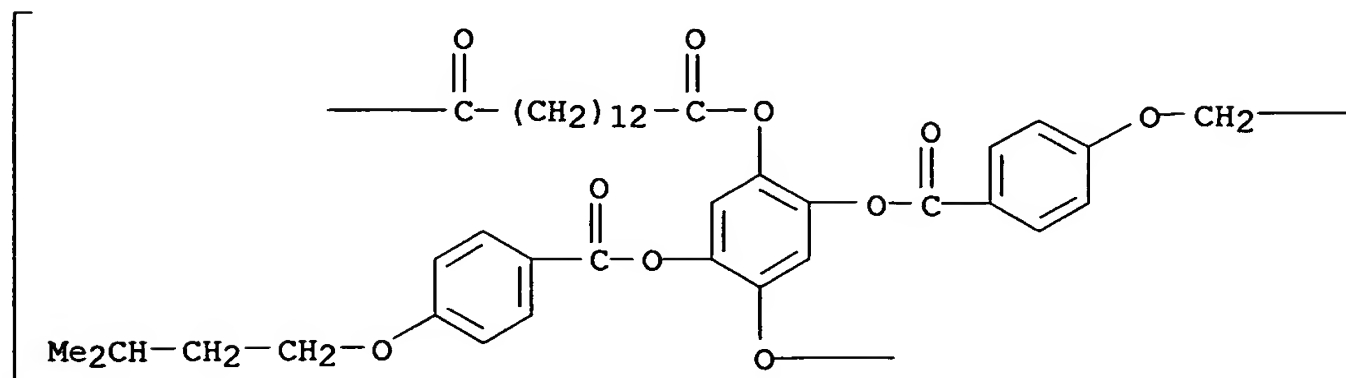
PAGE 1-B



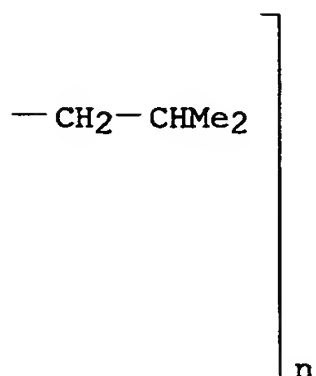
RN 195156-76-4 CAPLUS

CN . Poly[oxy[2,5-bis[[4-(3-methylbutoxy)benzoyl]oxy]-1,4-phenylene]oxy(1,14-dioxo-1,14-tetradecanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 272790-30-4 CAPLUS

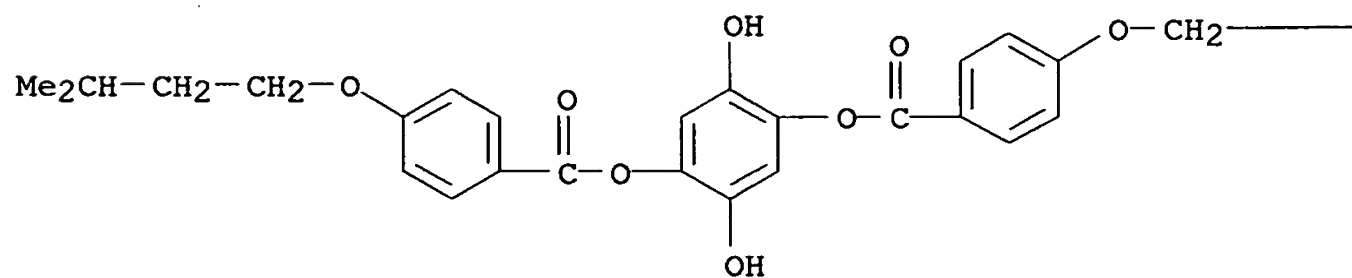
CN Benzoic acid, 4-(3-methylbutoxy)-, 2,5-dihydroxy-1,4-phenylene ester, polymer with hexanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

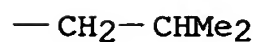
CRN 195156-64-0

CMF C30 H34 O8

PAGE 1-A



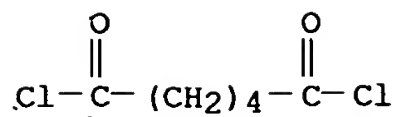
PAGE 1-B



CM 2

CRN 111-50-2

CMF C6 H8 Cl2 O2



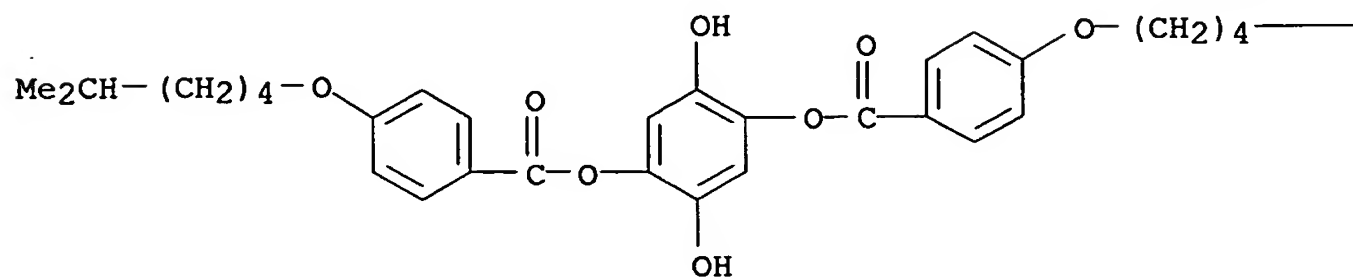
RN 272790-31-5 CAPLUS
 CN Benzoic acid, 4-[(5-methylhexyl)oxy]-, 2,5-dihydroxy-1,4-phenylene ester,
 polymer with hexanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 250163-53-2

CMF C34 H42 O8

PAGE 1-A



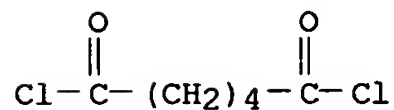
PAGE 1-B

—CHMe2

CM 2

CRN 111-50-2

CMF C6 H8 Cl2 O2



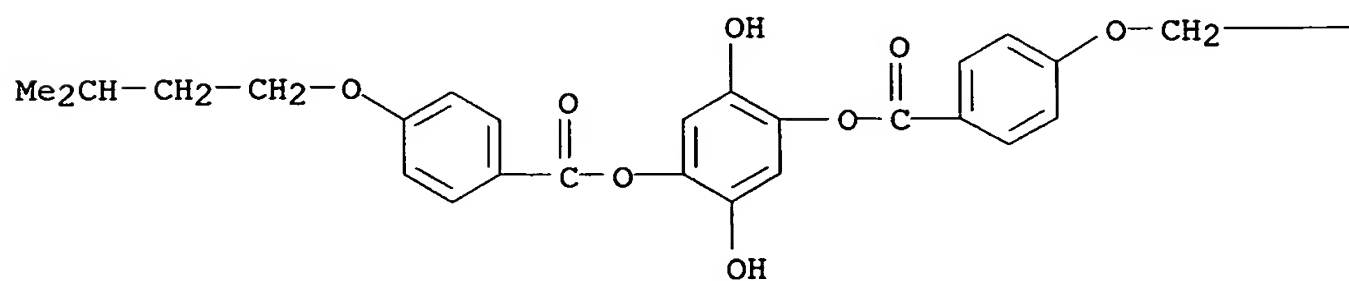
RN 272790-32-6 CAPLUS
 CN Benzoic acid, 4-(3-methylbutoxy)-, 2,5-dihydroxy-1,4-phenylene ester,
 polymer with octanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 195156-64-0

CMF C30 H34 O8

PAGE 1-A

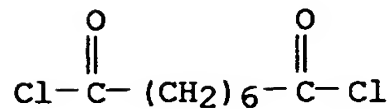


—CH₂—CHMe₂

CM 2

CRN 10027-07-3

CMF C8 H12 Cl2 O2



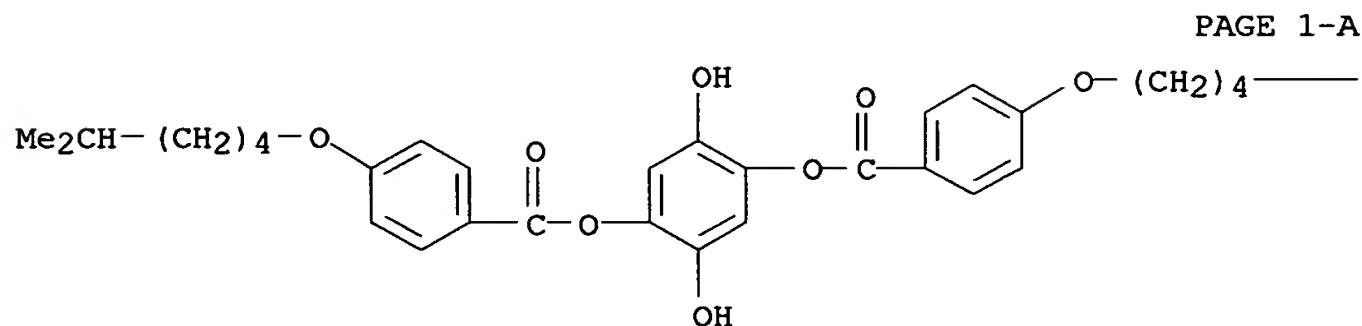
RN 272790-33-7 CAPLUS

CN Benzoic acid, 4-[(5-methylhexyl)oxy]-, 2,5-dihydroxy-1,4-phenylene ester, polymer with octanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 250163-53-2

CMF C34 H42 O8

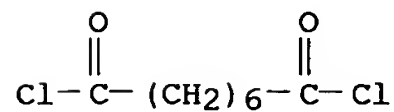


—CHMe₂

CM 2

CRN 10027-07-3

CMF C8 H12 Cl2 O2



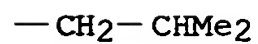
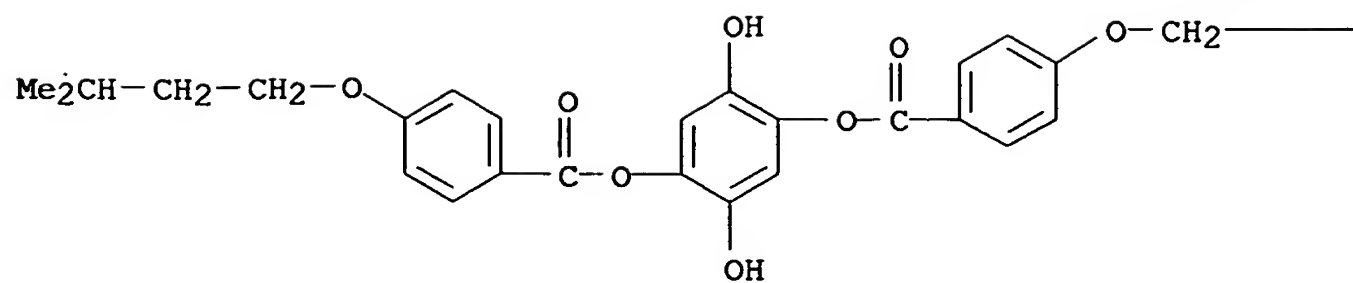
RN 272790-34-8 CAPLUS

CN Benzoic acid, 4-(3-methylbutoxy)-, 2,5-dihydroxy-1,4-phenylene ester, polymer with decanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 195156-64-0

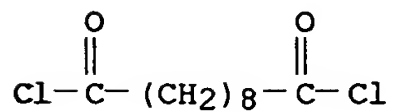
CMF C30 H34 O8



CM 2

CRN 111-19-3

CMF C10 H16 Cl2 O2



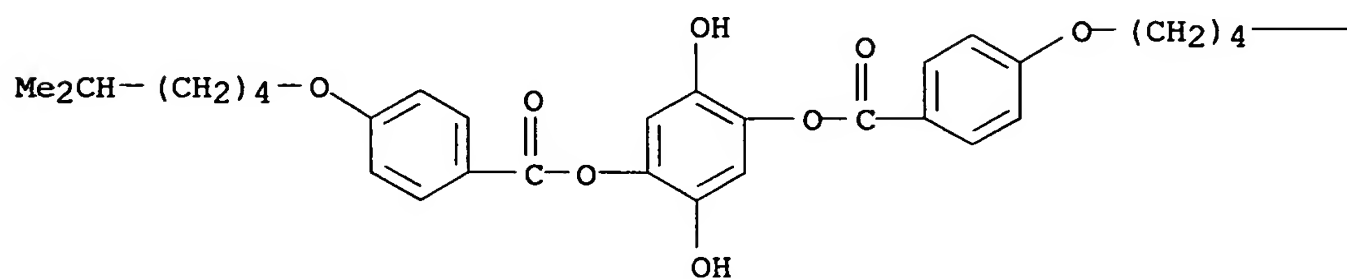
RN 272790-35-9 CAPLUS

CN Benzoic acid, 4-[(5-methylhexyl)oxy]-, 2,5-dihydroxy-1,4-phenylene ester, polymer with decanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 250163-53-2

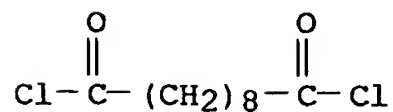
CMF C34 H42 O8



CM 2

CRN 111-19-3

CMF C10 H16 Cl2 O2

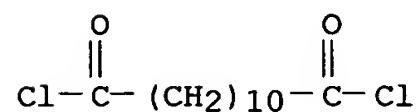


CN Benzoic acid, 4-(3-methylbutoxy)-, 2,5-dihydroxy-1,4-phenylene ester,
polymer with dodecanedioyl dichloride (9CI) (CA INDEX NAME)

CMF C30 H34 O8

CC(C)OCCOC1=CC=C(C(=O)OCC2=CC(=C(C=C2)O)OC(=O)C3=CC=C(C=C3)OCC4=CC=CC=C4)C=C1
$$-\text{CH}_2-\text{CHMe}_2$$

CMF C12 H20 C12 O2



CN Benzoic acid, 4-[(5-methylhexyl)oxy]-, 2,5-dihydroxy-1,4-phenylene ester,
polymer with dodecanedioyl dichloride (9CI) (CA INDEX NAME)

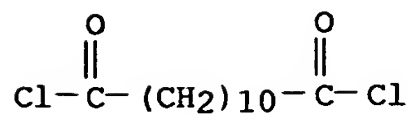
CMF C34 H42 O8

CC(C)CCCCOc1ccc(cc1)C(=O)Oc2c(O)cc(OC(=O)c3ccc(OCCCCO)cc3)cc2O
$$-\text{CHMe}_2$$

CM 2

CRN 4834-98-4

CMF C12 H20 Cl2 O2



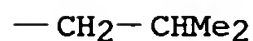
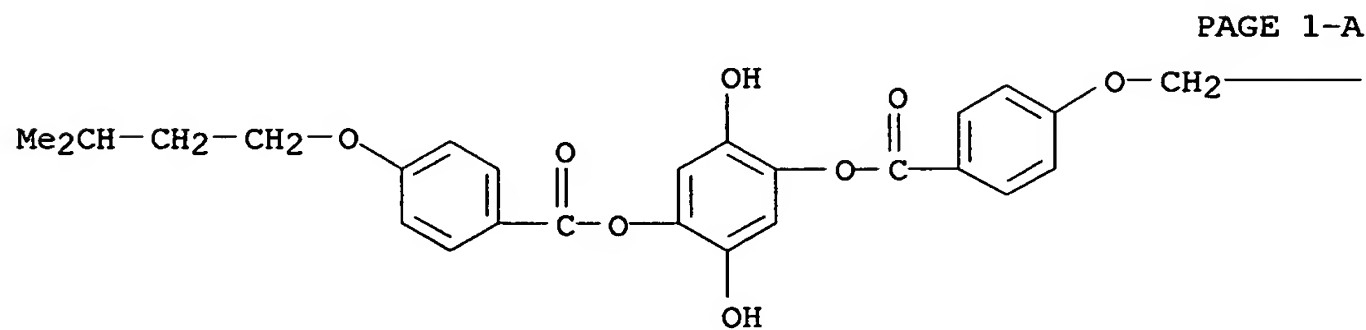
RN 272790-38-2 CAPLUS

CN Benzoic acid, 4-(3-methylbutoxy)-, 2,5-dihydroxy-1,4-phenylene ester, polymer with tetradecanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 195156-64-0

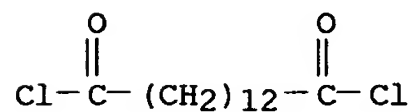
CMF C30 H34 O8



CM 2

CRN 21646-49-1

CMF C14 H24 Cl2 O2



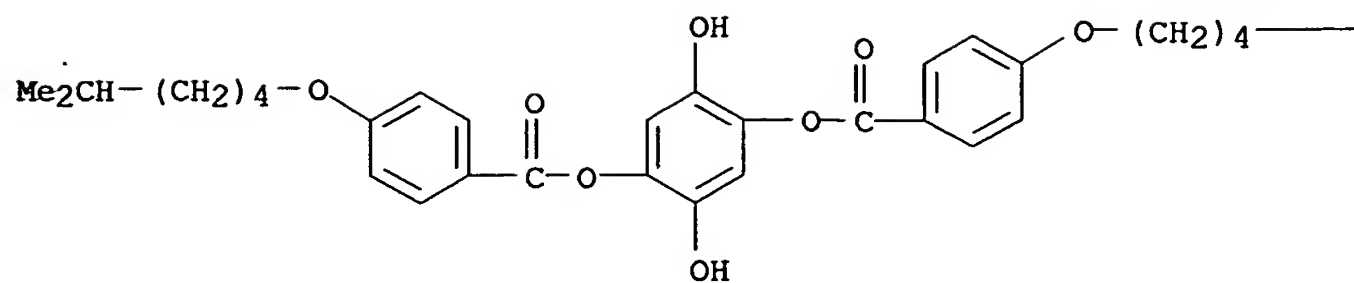
RN 272790-39-3 CAPLUS

CN Benzoic acid, 4-[(5-methylhexyl)oxy]-, 2,5-dihydroxy-1,4-phenylene ester, polymer with tetradecanedioyl dichloride (9CI) (CA INDEX NAME)

CM 1

CRN 250163-53-2

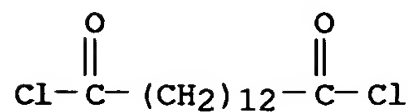
CMF C34 H42 O8

—CHMe₂

CM 2

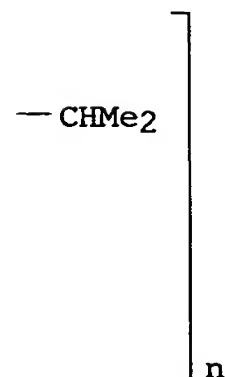
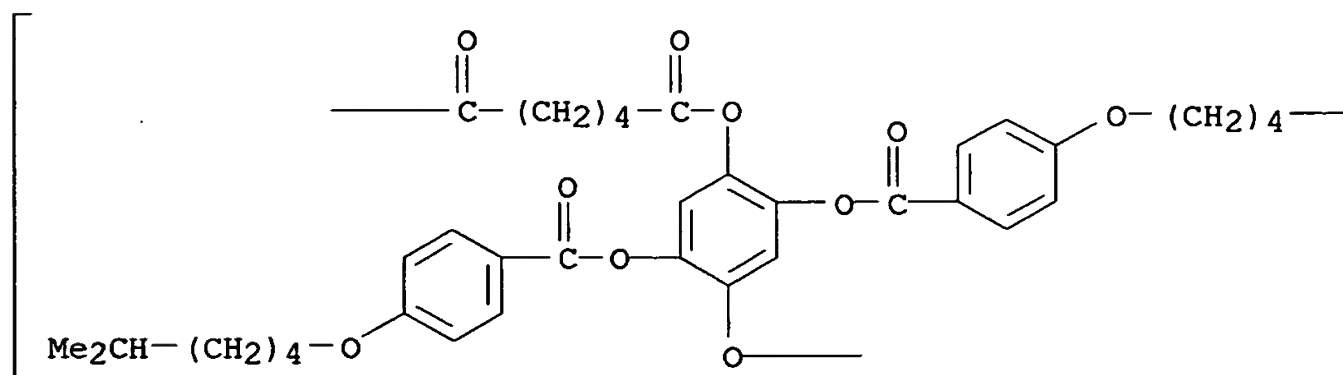
CRN 21646-49-1

CMF C14 H24 Cl2 O2



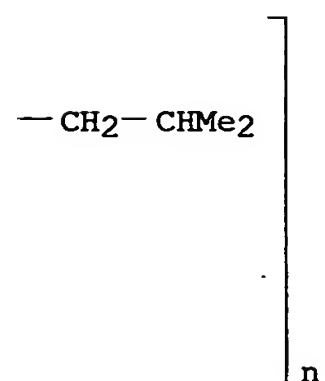
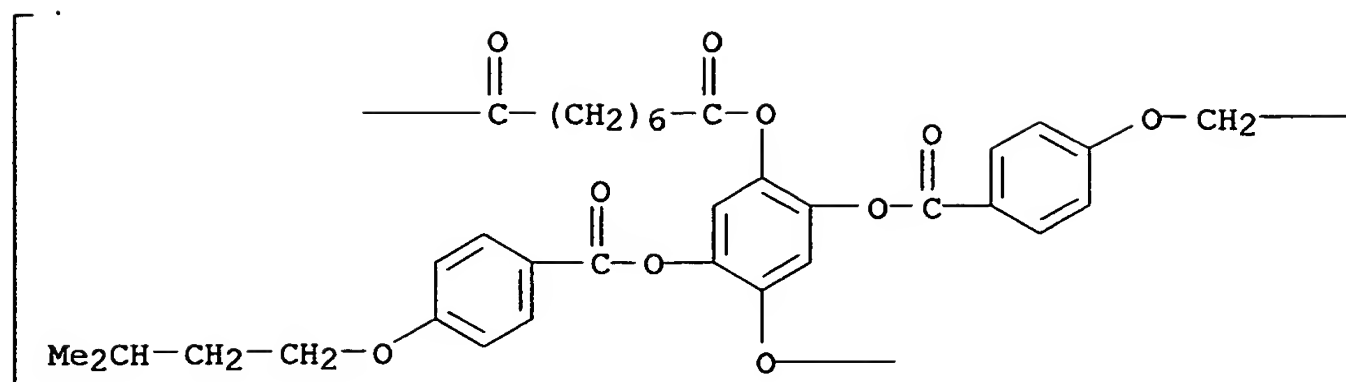
RN 272790-40-6 CAPLUS

CN Poly[oxy[2,5-bis[[4-[(5-methylhexyl)oxy]benzoyl]oxy]-1,4-phenylene]oxy(1,6-dioxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)



RN 272790-41-7 CAPLUS

CN Poly[oxy[2,5-bis[[4-(3-methylbutoxy)benzoyl]oxy]-1,4-phenylene]oxy(1,8-dioxo-1,8-octanediyl)] (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 2000:184128 CAPLUS

DOCUMENT NUMBER: 132:322203

TITLE: Synthesis and properties of new **mesogen**
-jacketed liquid crystalline **polymers**

AUTHOR(S): Mi, Qi-Ding; Zhou, Qi-Feng

CORPORATE SOURCE: Department of Polymer Science & Engineering, College
of Chemistry, Peking University, Beijing, 100871,
Peop. Rep. ChinaSOURCE: Chinese Journal of Polymer Science (2000),
18(2), 139-148

CODEN: CJPSEG; ISSN: 0256-7679

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Some new **mesogen**-jacketed liquid crystalline **polymers** with acrylic **polymer** backbones, spacers, and mesogenic units of different structures were synthesized by radical polymerization. The mesomorphic behavior of these **polymers** was examined using DSC and polarizing optical microscopy. Their liquid crystallinity is influenced by the variation of **polymer** backbone, **spacer**, and mesogenic unit and its terminal groups. The results show that (1) a more flexible **polymer** main -chain is more favorable to the formation of a liquid-crystalline phase, (2) a flexible **spacer** will decrease the "jacket effect" and the liquid crystallinity, and (3) a subtle modification of the terminal groups on the mesogenic unit may also have a significant influence on properties of the **polymers**.

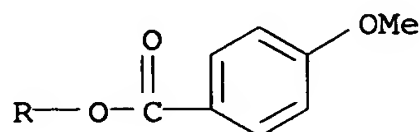
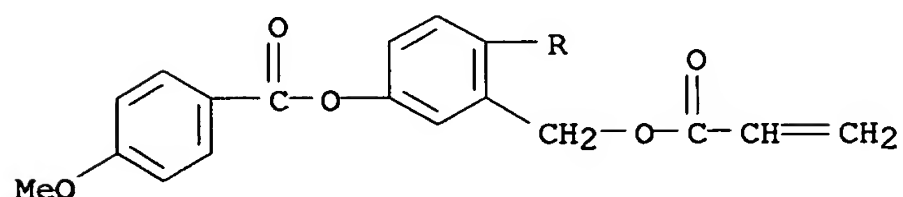
IT 105252-92-4P 126757-97-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(liquid-crystalline monomer; preparation and properties of **mesogen**
-jacketed liquid crystalline **polymers**)

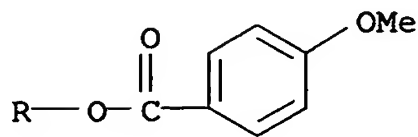
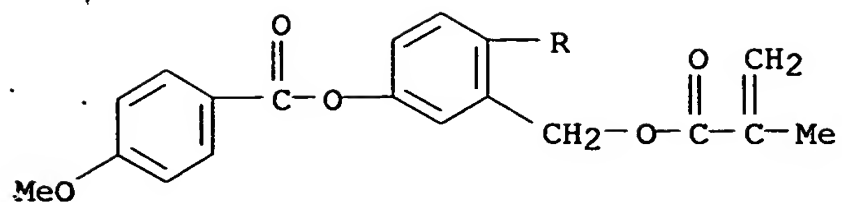
RN 105252-92-4 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-[[(1-oxo-2-propenyl)oxy]methyl]-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 126757-97-9 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,4-phenylene ester (9CI) (CA INDEX NAME)



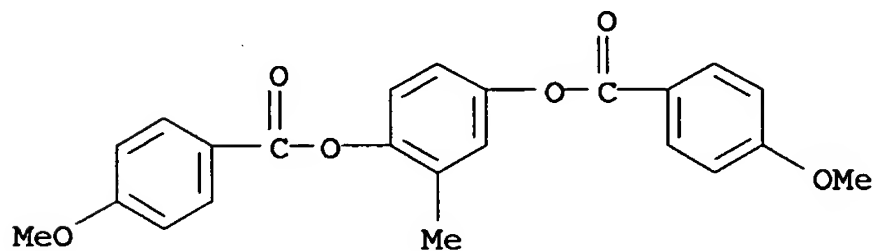
IT 51933-65-4P 143903-26-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(monomer intermediate; preparation and properties of **mesogen**-jacketed liquid crystalline **polymers**)

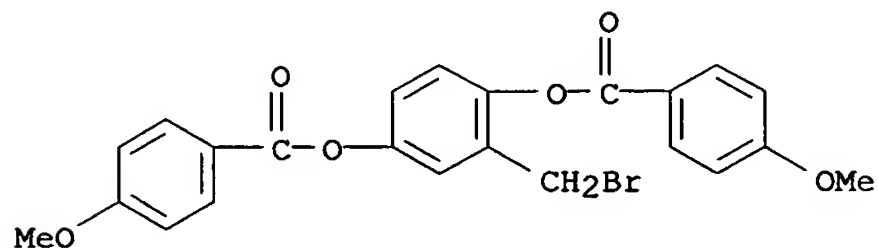
RN 51933-65-4 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 143903-26-8 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-(bromomethyl)-1,4-phenylene ester (9CI) (CA INDEX NAME)



IT 105280-90-8P 126757-98-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of **mesogen**-jacketed liquid crystalline **polymers**)

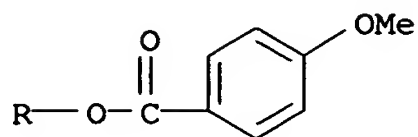
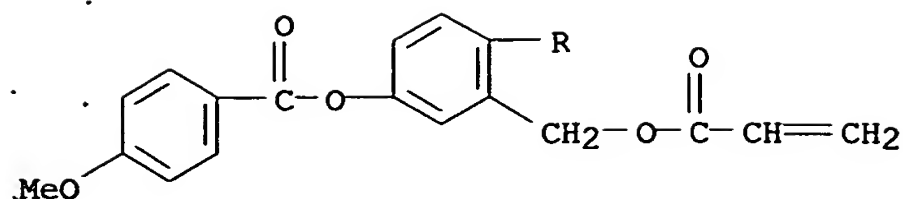
RN 105280-90-8 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-[[(1-oxo-2-propenyl)oxy]methyl]-1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 105252-92-4

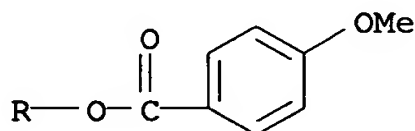
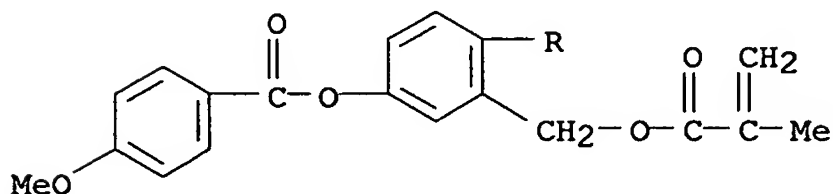
CMF C26 H22 O8



RN 126757-98-0 CAPLUS
 CN Benzoic acid, 4-methoxy-, 2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,4-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126757-97-9
 CMF C27 H24 O8



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:182099 CAPLUS

DOCUMENT NUMBER: 132:294382

TITLE: Synthesis of novel liquid crystalline thermosets (LCTs) and determination of their transition diagrams

AUTHOR(S): Douglas, Elliot P.; Gavrin, Arthur J.

CORPORATE SOURCE: Department of Materials Science and Engineering, University of Florida, Gainesville, FL, 32611, USA

SOURCE: Polymeric Materials Science and Engineering (2000), 82, 346-347

CODEN: PMSEDG; ISSN: 0743-0515

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

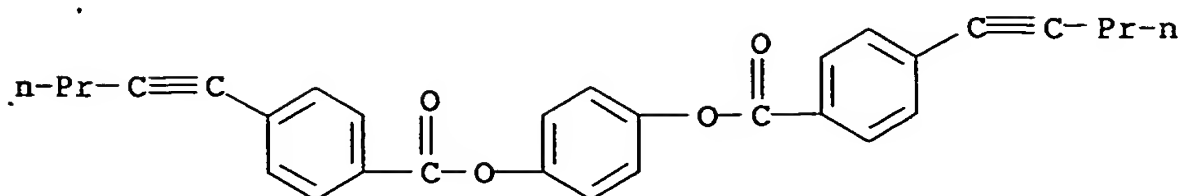
AB The stability of liquid crystalline phases for liquid crystalline thermoset acetylene monomers was sensitive to both the length of the **mesogen** and the length of the flexible group. Longer mesogens and longer flexible terminal groups gave more stable smectic phases. The initial isothermal curing studies showed that the liquid crystalline phases were destabilized during cure when the terminal group was a flexible nonpolar chain, contrary to previous observations for monomers with similar mol. structure.

IT 264918-22-1 264918-23-2 264918-24-3
 264918-25-4 264918-26-5 264918-27-6

RL: PRP (Properties)
 (thermal transition of liquid-crystalline)

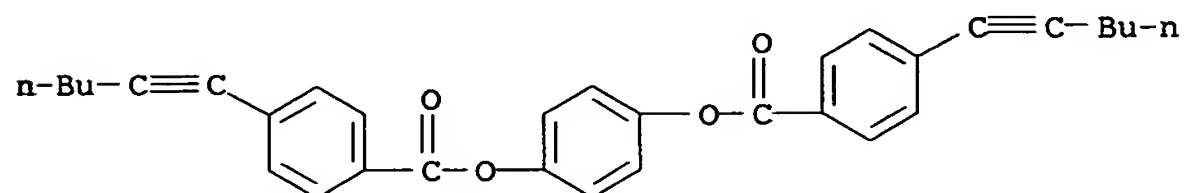
RN 264918-22-1 CAPLUS

CN . Benzoic acid, 4-(1-pentynyl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



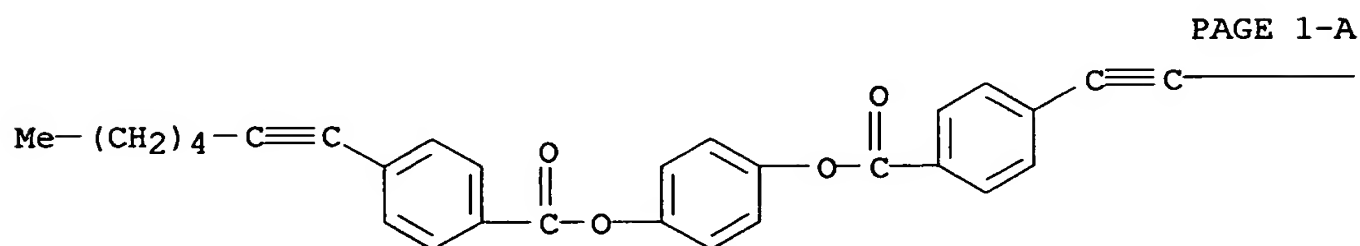
RN 264918-23-2 CAPLUS

CN Benzoic acid, 4-(1-hexynyl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 264918-24-3 CAPLUS

CN Benzoic acid, 4-(1-heptynyl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



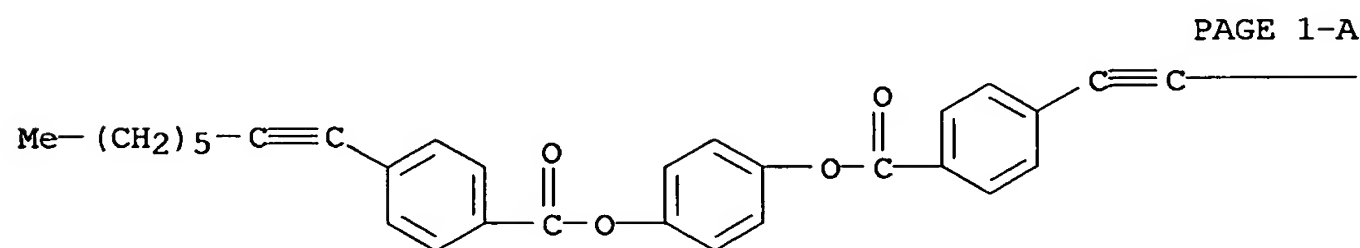
PAGE 1-A

PAGE 1-B

$\text{-(CH}_2)_4\text{-Me}$

RN 264918-25-4 CAPLUS

CN Benzoic acid, 4-(1-octynyl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



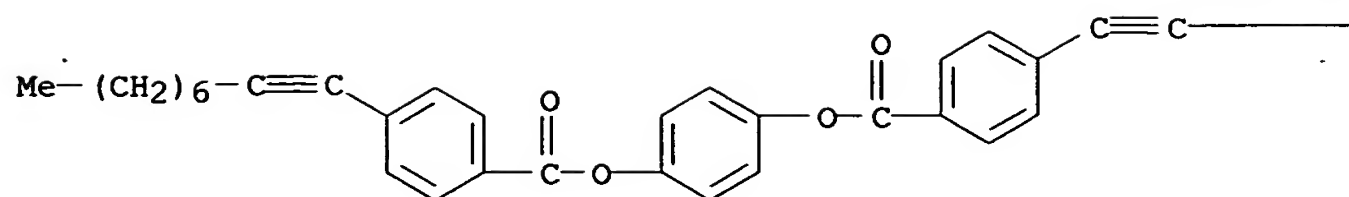
PAGE 1-A

PAGE 1-B

$\text{-(CH}_2)_5\text{-Me}$

RN 264918-26-5 CAPLUS

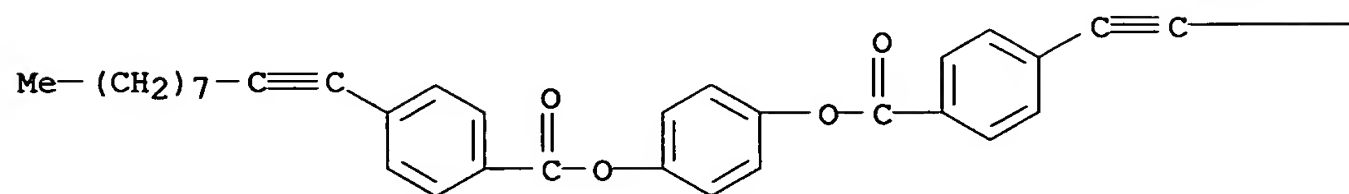
CN Benzoic acid, 4-(1-nonynyl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



— (CH₂)₆—Me

RN 264918-27-6 CAPLUS

CN Benzoic acid, 4-(1-decynyl)-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



— (CH₂)₇—Me

REFERENCE COUNT:

19

THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>

L11 ANSWER 19 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1998:658414 CAPLUS
 DOCUMENT NUMBER: 129:349118
 TITLE: Liquid crystal display and manufacture thereof
 INVENTOR(S): Walton, Harry Garth; Lines, Edward Peter
 PATENT ASSIGNEE(S): Sharp Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10268318	A2	19981009	JP 1998-55553	19980306 <--
JP 3596722	B2	20041202		
US 6201588	B1	20010313	US 1998-35350	19980305
PRIORITY APPLN. INFO.:			GB 1997-4623	A 19970306

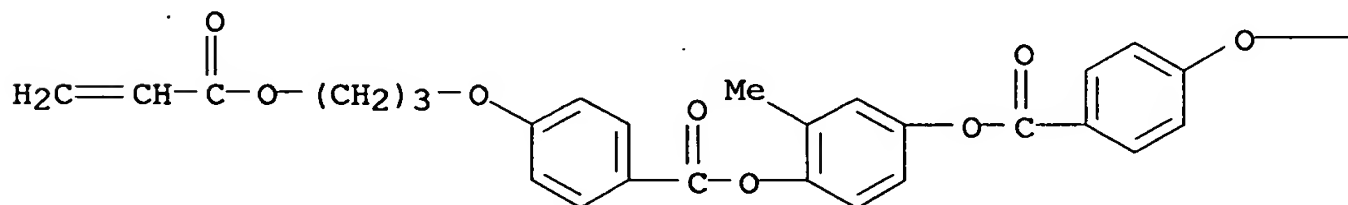
AB The liquid crystal display comprises a 1st orientation layer made up of a mixture of a 1st reactive **mesogen** and a 2nd reactive **mesogen**, in which the 1st **mesogen** has more **polymerizable** functional groups than the 2nd **mesogen** and a ratio of the 1st **mesogen** to the 2nd **mesogen** gives a predetd. pretilt angle. The manufacture was also claimed. The control of tilt-off vertical orientations was easily controlled.

IT 174063-87-7, RM257
 RL: DEV (Device component use); USES (Uses)
 (mesogens contained in liquid crystal display)

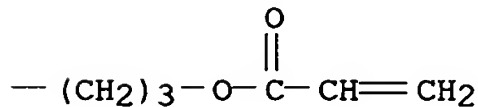
RN 174063-87-7 CAPLUS

CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



ACCESSION NUMBER: 1999:36774 CAPLUS

DOCUMENT NUMBER: 130:175592

TITLE: Stabilization of the Sc phase in mixtures of laterally aryl substituted mesogens

AUTHOR(S): Stutzer, C.; Weissflog, W.; Pelzl, G.; Diele, S.

CORPORATE SOURCE: Martin-Luther-Universitat Halle-Wittenberg, Institut fur Physikalische Chemie, Halle, D-06108, Germany

SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1998), 317, 181-195

CODEN: MCLCE9; ISSN: 1058-725X

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Laterally 4-nitrobenzyloxycarbonyl substituted three-ring compds. preferably exhibit smectic A phases. However, induction of smectic C phases can be observed in binary mixts. with mesogens having a similar mol. shape but not a strongly polar group at the laterally positioned Ph ring. The scale of phase induction depends on the length of terminal alkyl chains, type and position of substituents as well as the length of the flexible **spacer** linking the lateral aryl group to the basic **mesogen**. X-ray studies of selected mixts. verify that the structure of induced smectic C phases is intercalated comparable to orthogonal phases of lateral aryl substituted mesogens.

IT 103521-17-1 113267-83-7 113267-85-9

113267-88-2 136008-58-7 158748-73-3

173039-63-9 173039-64-0 173039-65-1

RL: PEP (Physical, engineering or chemical process); PRP (Properties);

PROC (Process)

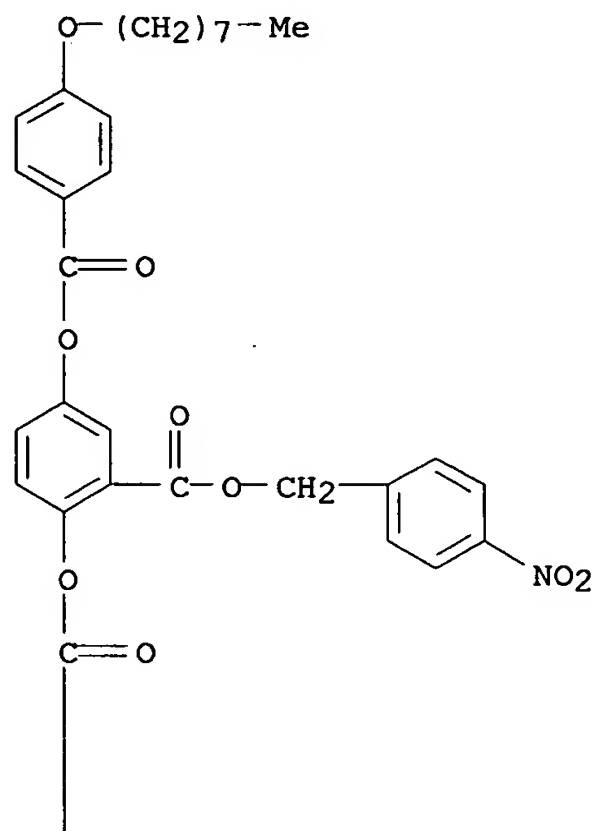
(liquid crystal properties of pure and binary mixts. with

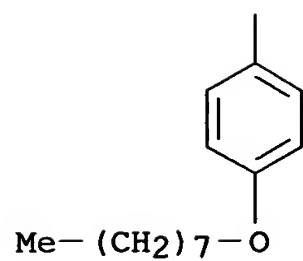
(heptyloxyphenylmethyloxocarbonylphenylene)bis(octyloxybenzoate))

RN 103521-17-1 CAPLUS

CN Benzoic acid, 2,5-bis[[4-(octyloxy)benzoyl]oxy]-, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)

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RN 113267-83-7 CAPLUS
CN Benzoic acid, 2,5-bis[(4-butoxybenzoyl)oxy]-, (4-nitrophenyl)methyl ester
(9CI) (CA INDEX NAME)

ACCESSION NUMBER: 1999:55473 CAPLUS
 DOCUMENT NUMBER: 130:197051
 TITLE: Synthesis of thermotropic biphenyl- and hydroquinone bisbenzoate-type polyesters with thioether spacers
 AUTHOR(S): Aragon, E.; Milano, J. C.; Robert, J. M.; Vernet, J.-L.; Gallot, B.
 CORPORATE SOURCE: Equipe d'accueil DRED 1356, Matériaux à Finalités Spécifiques, Laboratoire de Chimie Appliquée. - I.S.I.T.V., Université de Toulon et du Var, La Garde, 83957, Fr.
 SOURCE: European Polymer Journal (1998), Volume Date 1999, 35(3), 385-393
 CODEN: EUPJAG; ISSN: 0014-3057
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: French

AB Eight polyesters with a flexible thioether-type group were prepared through a Michael reaction between aromatic diacrylates and alkylenedithiols. The four polyesters having a 4,4'-biphenyldiyl **mesogen** group have the mesophase SmBl, whereas the four others which have a much longer **mesogen** group of a hydroquinone bisbenzoate type give rise to the nematic mesophase at a higher temperature

IT 123349-64-4P 123349-65-5P 123349-66-6P

123349-67-7P 220765-82-2P 220765-88-8P

220765-92-4P 220765-96-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation of thermotropic polyester-polythioethers by Michael polymerization)

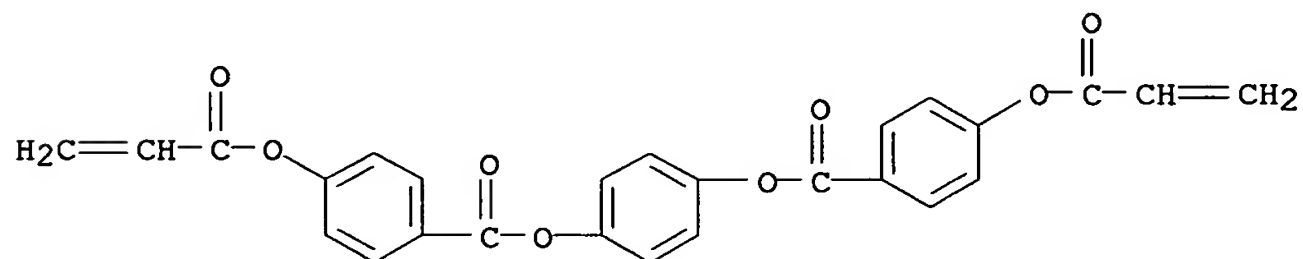
RN 123349-64-4 CAPLUS

CN Benzoic acid, 4-[(1-oxo-2-propenyl)oxy]-, 1,4-phenylene ester, polymer with 1,3-propanedithiol (9CI) (CA INDEX NAME)

CM 1

CRN 91442-58-9

CMF C26 H18 O8



CM 2

CRN 109-80-8

CMF C3 H8 S2

HS-CH2-CH2-CH2-SH

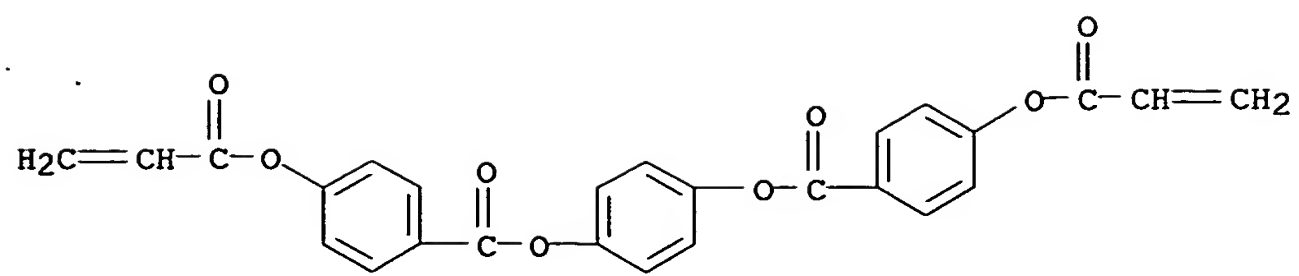
RN 123349-65-5 CAPLUS

CN Benzoic acid, 4-[(1-oxo-2-propenyl)oxy]-, 1,4-phenylene ester, polymer with 1,4-butanedithiol (9CI) (CA INDEX NAME)

CM 1

CRN 91442-58-9

CMF C26 H18 O8



L11 ANSWER 16 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1999:228111 CAPLUS
 DOCUMENT NUMBER: 130:259352
 TITLE: Reflective broadband polarizer
 INVENTOR(S): Verral, Mark; Argent, John Philip; Slaney, Kim;
 Coates, David
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany
 SOURCE: Ger. Offen., 34 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19842701	A1	19990401	DE 1998-19842701	19980917 <--
US 6099758	A	20000808	US 1998-153997	19980916 <--
GB 2329899	A1	19990407	GB 1998-20280	19980917 <--
GB 2329899	B2	20010523		
JP 11248943	A2	19990917	JP 1998-280508	19980917 <--
			EP 1997-116151	A 19970917

PRIORITY APPLN. INFO.:

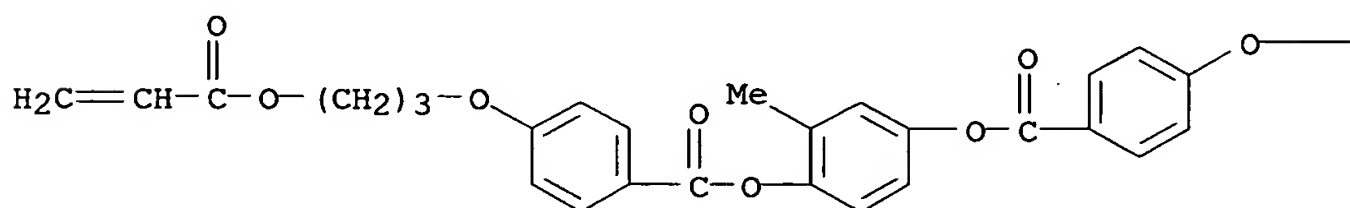
AB In the reflective broadband polarizer comprising a layer comprised of a **polymerizable mesogen** material having helical structure with planar alignment, obtained by mixing a chiral **polymerizable mesogen** material containing (a) at least 1 achiral **polymerizable mesogen** compound, (b) at least 1 chiral compound, and (c) a polymerization initiator, the material is placed between 2 different substrates and polymerized by heat or actinic ray and/or an O2-barrier layer is placed on the polymerized **mesogen** layer. The polarizer can be used in a liquid crystal display.

IT **174063-87-7**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of liquid crystalline **polymer** layer of reflective broadband polarizer)

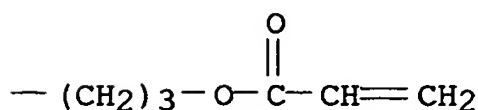
RN 174063-87-7 CAPLUS

CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IT **221317-16-4P 221317-17-5P**
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (liquid crystalline **polymer** layer of reflective broadband polarizer)

RN 221317-16-4 CAPLUS

CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 4'-(2-methylbutyl)[1,1'-biphenyl]-4-yl ester, polymer with

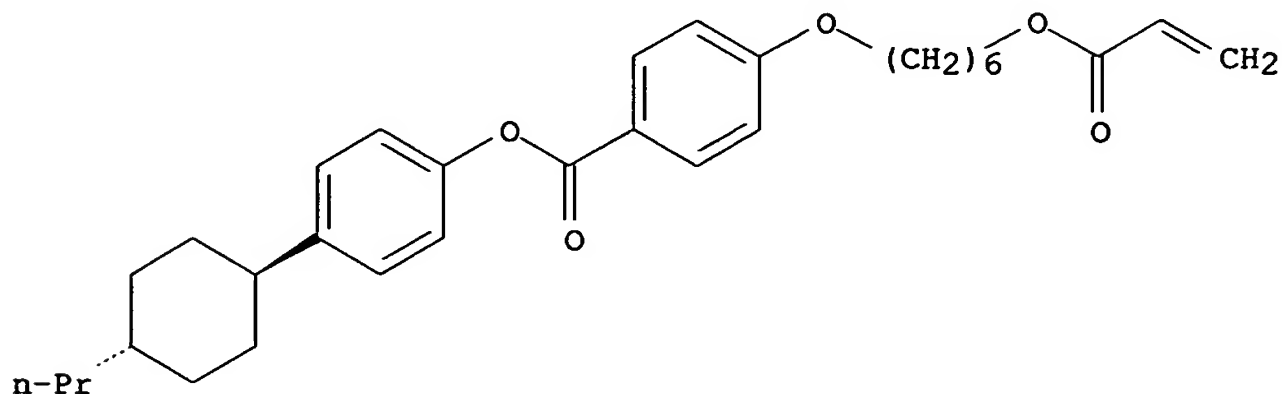
2-methyl-1,4-phenylene bis[4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoate]
and trans-4-(4-propylcyclohexyl)phenyl 4-[[6-[(1-oxo-2-
propenyl)oxy]hexyl]oxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 182311-45-1

CMF C31 H40 O5

Relative stereochemistry.

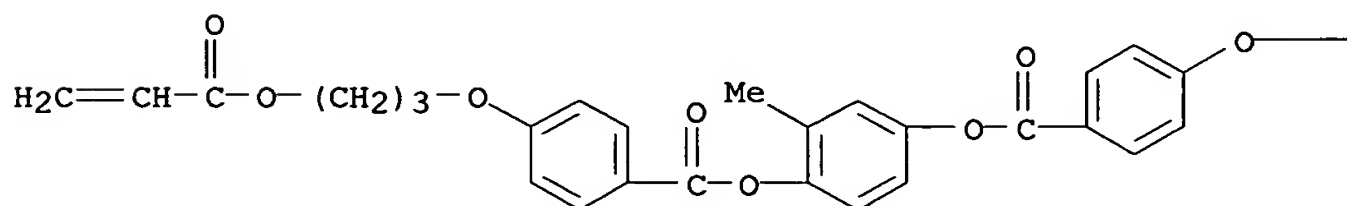


CM 2

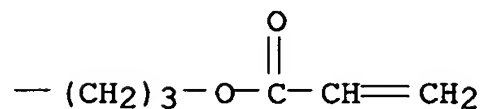
CRN 174063-87-7

CMF C33 H32 O10

PAGE 1-A



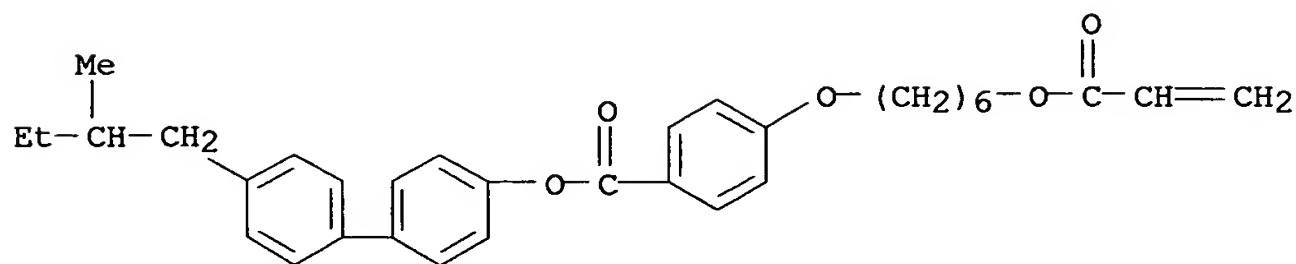
PAGE 1-B



CM 3

CRN 168904-02-7

CMF C33 H38 O5



RN 221317-17-5 CAPLUS

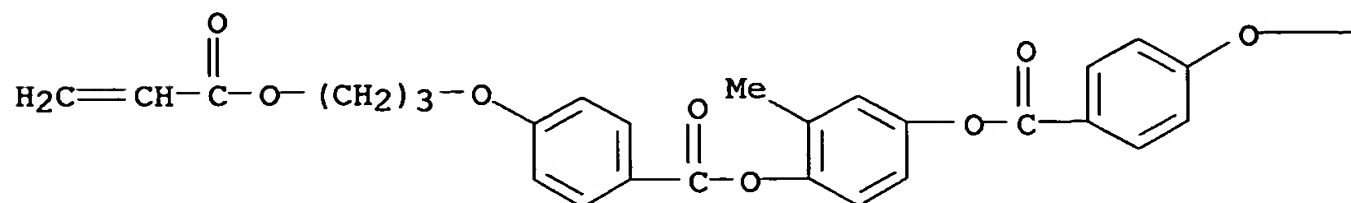
CN . Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 4-cyanophenyl ester, polymer with 4'-(2-methylbutyl)[1,1'-biphenyl]-4-yl 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate and 2-methyl-1,4-phenylene bis[4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

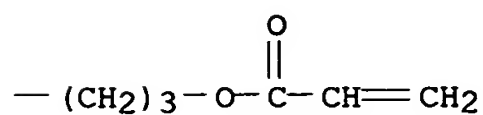
CRN 174063-87-7

CMF C33 H32 O10

PAGE 1-A



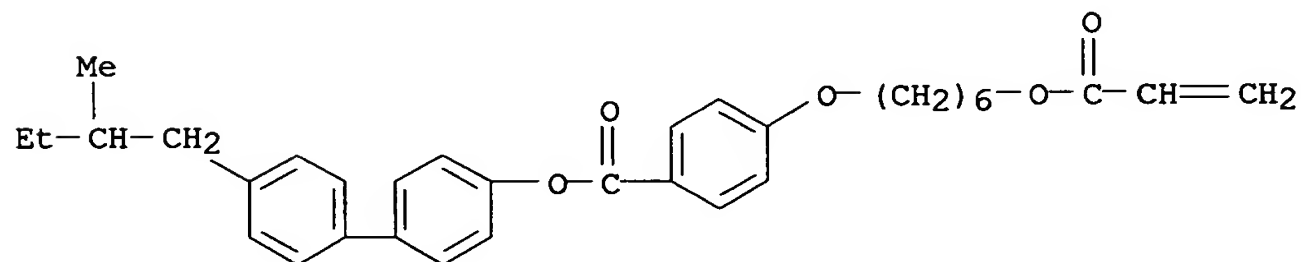
PAGE 1-B



CM 2

CRN 168904-02-7

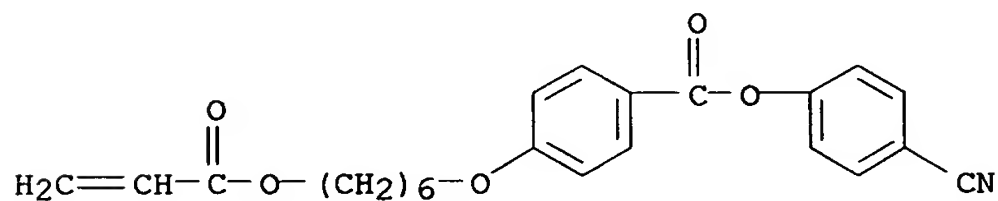
CMF C33 H38 O5



CM 3

CRN 83847-14-7

CMF C23 H23 N O5



ACCESSION NUMBER: 1999:228111 CAPLUS
 DOCUMENT NUMBER: 130:259352
 TITLE: Reflective broadband polarizer
 INVENTOR(S): Verral, Mark; Argent, John Philip; Slaney, Kim;
 Coates, David
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany
 SOURCE: Ger. Offen., 34 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19842701	A1	19990401	DE 1998-19842701	19980917 <--
US 6099758	A	20000808	US 1998-153997	19980916 <--
GB 2329899	A1	19990407	GB 1998-20280	19980917 <--
GB 2329899	B2	20010523		
JP 11248943	A2	19990917	JP 1998-280508	19980917 <--
PRIORITY APPLN. INFO.:			EP 1997-116151	A 19970917

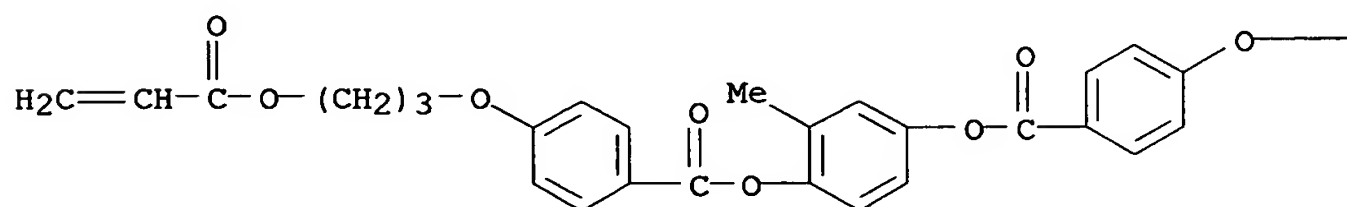
AB In the reflective broadband polarizer comprising a layer comprised of a **polymerizable mesogen** material having helical structure with planar alignment, obtained by mixing a chiral **polymerizable mesogen** material containing (a) at least 1 achiral **polymerizable mesogen** compound, (b) at least 1 chiral compound, and (c) a polymerization initiator, the material is placed between 2 different substrates and polymerized by heat or actinic ray and/or an O2-barrier layer is placed on the polymerized **mesogen** layer. The polarizer can be used in a liquid crystal display.

IT **174063-87-7**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of liquid crystalline **polymer** layer of reflective broadband polarizer)

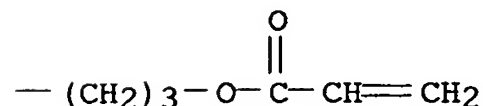
RN 174063-87-7 CAPLUS

CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

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IT 221317-16-4P 221317-17-5P

ACCESSION NUMBER: 1999:558854 CAPLUS

DOCUMENT NUMBER: 132:152246

TITLE: **Mesogen-jacketed liquid crystalline polymers** via stable free radical **polymerization**

AUTHOR(S): Gopalan, Padma; Pragliola, Stefania; Ober, Christopher K.; Mather, Patrick T.; Jeon, Hong G.

CORPORATE SOURCE: Cornell University, Materials Science and Engineering, Ithaca, NY, 14850, USA

SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(2), 372-373
CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Stable free radical polymerization using 1-phenyl-1-(2,2,6,6-tetramethyl-1-piperidinyloxy)ethane as initiator was applied to the controlled synthesis of poly(2,5-bis[(4-butyl-benzoyl)oxy]styrene). This **mesogen** jacketed liquid crystalline **polymer**, has the mesogenic units attached directly to the backbone in a side-on mode, and can be classified as a main chain liquid crystalline **polymer** based on its phys. properties. The mol. weight of the growing chain and the conversion of the monomer were well controlled with reaction time. The **polymer** consistently showed a narrow mol. weight distribution (1.2 - 1.4). Compared to polymerization of styrene under nearly identical conditions, polymerization of 2,5-bis[(4-butyl-benzoyl)oxy]styrene showed significantly higher reaction rate and monomer conversion efficiency. A nematic mesophase was observed in the **polymer** glass transition to decomposition. The mol. organization was determined by WAXS.

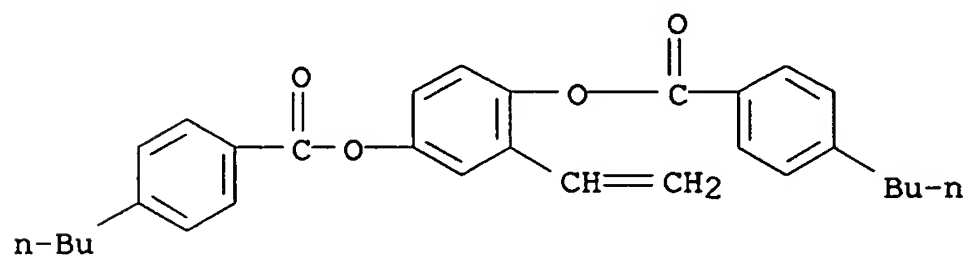
IT 152241-49-1P, 2,5-Bis[(4-butylbenzoyl)oxy]styrene

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(monomer; preparation and phase properties of **mesogen**-jacketed liquid crystalline poly(bis(butylbenzoyloxy)styrene) via stable free radical polymerization)

RN 152241-49-1 CAPLUS

CN Benzoic acid, 4-butyl-, 2-ethenyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



IT 152241-50-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and phase properties of **mesogen**-jacketed liquid crystalline poly(bis(butylbenzoyloxy)styrene) via stable free radical polymerization)

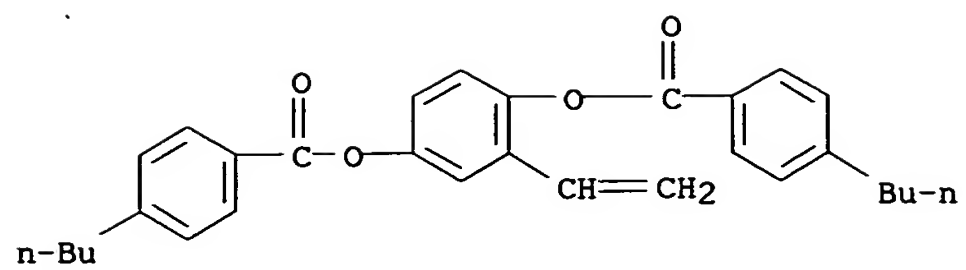
RN 152241-50-4 CAPLUS

CN Benzoic acid, 4-butyl-, 2-ethenyl-1,4-phenylene ester, homopolymer (9CI)
(CA INDEX NAME)

CM 1

CRN 152241-49-1

CMF C30 H32 O4



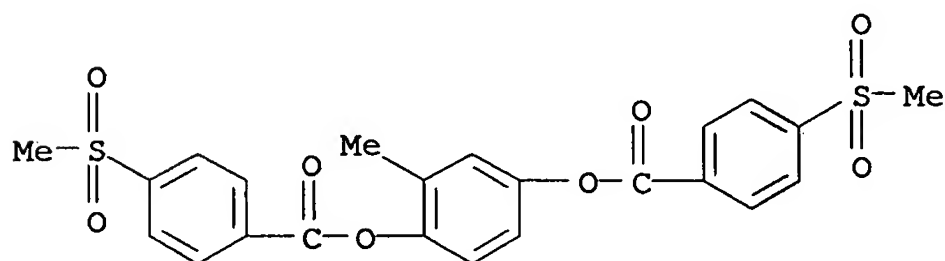
ACCESSION NUMBER: 1999:558936 CAPLUS
 DOCUMENT NUMBER: 132:194730
 TITLE: Polynorbornenes with laterally attached
 2,5-bis[(4'-n-alkylthiobenzoyl)oxy]benzyl and
 2,5-bis[(4'-n-alkylsulfonylbenzoyl)oxy]benzyl mesogens
 AUTHOR(S): Pugh, Coleen; Thompson, Matthew J.; Mullins, Richard
 J.; Hwang, Jong Hwi
 CORPORATE SOURCE: Maurice Morton Institute of Polymer Science, The
 University of Akron, Akron, OH, 44325-3909, USA
 SOURCE: Polymer Preprints (American Chemical Society, Division
 of Polymer Chemistry) (1999), 40(2), 536-537
 CODEN: ACPPAY; ISSN: 0032-3934
 PUBLISHER: American Chemical Society, Division of Polymer
 Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Since there is greater interaction between the mesogens in a smectic vs.
 Nematic alignment, we are attempting to induce smectic layering in the
 title **polymers** prepared by "living" ring-opening metathesis
 (co)polymerization, and mixts. of the corresponding low molar mass model compds.,
 via electron-donor-acceptor interactions. The thioether analogs of
 2,5-bis[(4"-n-alkoxybenzoyl)oxy]benzyl mesogens are promising
 electron-donor candidates, and the corresponding sulfones are promising
 electron-acceptor candidates. This paper will present the synthesis and
 thermotropic behavior of the homopolymers and corresponding model compds.,
 as well as preliminary studies of the copolymers and mixts.

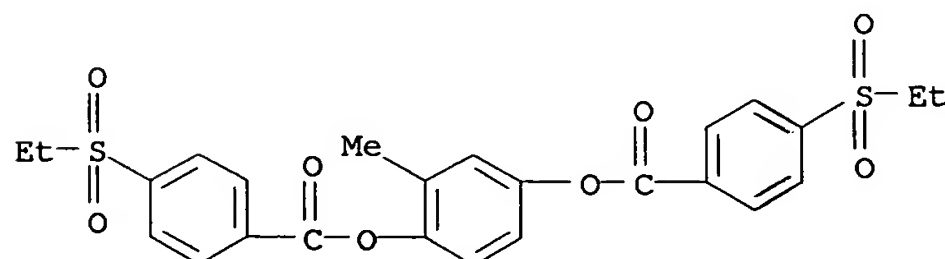
IT 259797-27-8P 259797-28-9P 259797-29-0P
 259797-30-3P 259797-31-4P 259797-32-5P
 259797-33-6P 259797-34-7P 259797-35-8P
 259797-36-9P 259797-37-0P 259797-38-1P
 259797-39-2P 259797-40-5P 259797-41-6P
 259797-42-7P 259797-43-8P 259797-44-9P
 259797-45-0P 259797-46-1P 259797-48-3P
 259797-49-4P 259797-50-7P 259797-51-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (model compound; preparation and phase characterization of polynorbornenes
 with laterally attached mesogenic groups and their model compds.)

RN 259797-27-8 CAPLUS
 CN Benzoic acid, 4-(methylsulfonyl)-, 2-methyl-1,4-phenylene ester (9CI) (CA
 INDEX NAME)

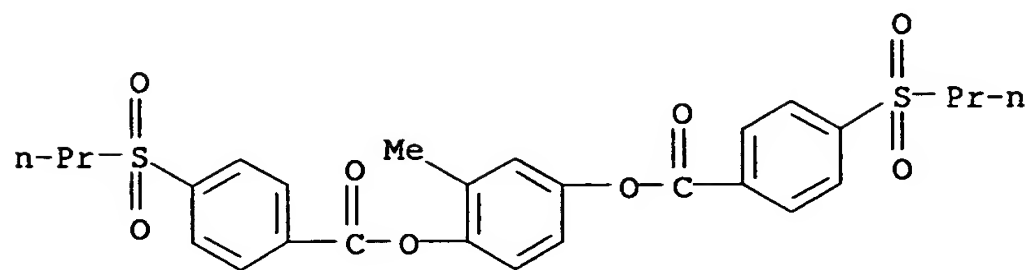


RN 259797-28-9 CAPLUS
 CN Benzoic acid, 4-(ethylsulfonyl)-, 2-methyl-1,4-phenylene ester (9CI) (CA
 INDEX NAME)



RN . 259797-29-0 CAPLUS

CN Benzoic acid, 4-(propylsulfonyl)-, 2-methyl-1,4-phenylene ester (9CI) (CA
INDEX NAME)



RN 259797-30-3 CAPLUS

CN Benzoic acid, 4-(butylsulfonyl)-, 2-methyl-1,4-phenylene ester (9CI) (CA
INDEX NAME)

ACCESSION NUMBER: 1999:674556 CAPLUS

DOCUMENT NUMBER: 132:50299

TITLE: Mesogen-jacketed liquid crystalline
polymers via stable free radical
polymerizationAUTHOR(S): Pragliola, Stefania; Ober, Christopher K.; Mather,
Patrick T.; Jeon, Hong G.

CORPORATE SOURCE: Cornell Univ., Ithaca, NY, 14853, USA

SOURCE: Macromolecular Chemistry and Physics (1999),
200(10), 2338-2344

CODEN: MCHPES; ISSN: 1022-1352

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

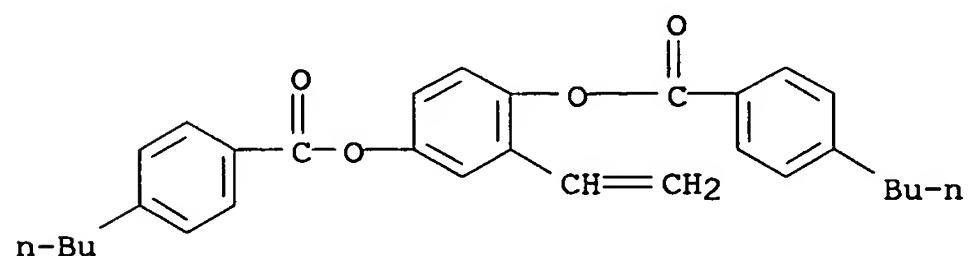
AB Stable free-radical polymerization was used in the controlled synthesis of poly(2,5-bis[(4-butylbenzoyl)oxy]styrene), PBBOS. This **mesogen**-jacketed liquid-crystalline **polymer**, which has mesogenic units attached directly to the backbone in a side-on mode, was found to exhibit thermotropic liquid crystallinity similar to more conventional main-chain architectures. Stable free-radical polymerization of PBBOS consistently produced mol. weight distributions below the theor. limiting polydispersity of 1.5 calculated for a conventional free radical polymerization process. Surprisingly, a comparison of the synthesis of polystyrene to the polymerization of PBBOS under nearly identical conditions showed that the PBBOS polymerized with a significantly higher reaction rate and monomer conversion efficiency. The nematic phase of these **polymers** was determined to be stable over the temperature range spanning the **polymer** glass transition temperature up to the temperature for thermal decomposition. The mol. arrangement of the PBBOS **polymers** was examined by wide-angle x-ray diffraction and is described here.

IT 152241-49-1P 152241-50-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation of **mesogen**-jacketed liquid crystalline **polymers**
via stable free-radical polymerization of bis[(butylbenzoyl)oxy]styrene)

RN 152241-49-1 CAPLUS

CN Benzoic acid, 4-butyl-, 2-ethenyl-1,4-phenylene ester (9CI) (CA INDEX
NAME)

RN 152241-50-4 CAPLUS

CN Benzoic acid, 4-butyl-, 2-ethenyl-1,4-phenylene ester, homopolymer (9CI)
(CA INDEX NAME)

CM 1

CRN 152241-49-1

CMF C30 H32 O4

